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AF55JV✳MA✳✳N
AF55JS✳MA✳✳N
AF55JV✳MAEEX
AF55JS✳MAEEX

Air Conditioner
user & installation manual

Planet First 100% Recycled Paper

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imagine the possibilities

Thank you for purchasing this Samsung product.

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Features of your new air conditioner

Environment-friendly air conditioner

Your environment-friendly air conditioner has achieved not only high efficiency, low noise, and energy saving technology but also certified RoHS technology.

Energy saving technology with S-inverter system

The S-inverter system that changes the capacity of the air conditioner from 27 % to 123% with one compressor depending on the usage condition will provide optimal cooling performance with less energy consumption by reducing unnecessary electric consumption.

Auto air flow blades

The auto air flow blade that opens and closes according to the on or off operation of the air conditioner increases the usage convenience and it also prevent dust from coming into the air conditioner when the air conditioner is not used for a long term.

Powerful speed/Convenient remote operation

The speed operation will provide you with quick cooling(heating) for 30 minutes and the remote operation will provide you with cooling(heating) even for remote area. (Heating is applicable for AF55JS✳MA✳ model only)

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Safety precautions

Before using your new air conditioner, please read this manual thoroughly to ensure that you know how to safely and efficiently operate the extensive features and functions of your new appliance.

Because the following operating instructions cover various models, the characteristics of your air conditioner may differ slightly from those described in this manual. If you have any questions, call your nearest contact center or find help and information online at www.samsung.com.

These warning signs are here to prevent injury to you and others. Please follow them carefully.

Important safety symbols and precautions :

⚠ **WARNING**	Hazards or unsafe practices that may result in **severe personal injury or death.**
⚠ **CAUTION**	Hazards or unsafe practices that may result in **minor personal injury or property damage.**

	Follow directions.
	Do NOT attempt.
	Make sure the machine is grounded to prevent electric shock.
	Unplug the power plug from the wall socket.
	Do NOT disassemble.

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FOR INSTALLATION ⚠ WARNING

Use the power line with the power specifications of the product or higher and use the power line for this appliance only. In addition, do not use an extension line.

- ▶ Extending the power line may result in electric shock or fire.
- ▶ Do not use an electric transformer. It may result in electric shock or fire.
- ▶ If the voltage/frequency/rated current condition is different, it may cause fire.

The installation of this appliance must be performed by a qualified technician or service company.

- ▶ Failing to do so may result in electric shock, fire, explosion, problems with the product, or injury.

Install a switch and circuit breaker dedicated to the air conditioner.

- ▶ Failing to do so may result in electric shock or fire.

Fix the outdoor unit firmly so that the electric part of the outdoor unit is not exposed.

- ▶ Failing to do so may result in electric shock or fire.

Do not install this appliance near a heater, inflammable material. Do not install this appliance in a humid, oily or dusty location, in a location exposed to direct sunlight and water (rain drops). Do not install this appliance in a location where gas may leak.

- ▶ This may result in electric shock or fire.

Never install the outdoor unit in a location such as on a high external wall where it could fall.

- ▶ If the outdoor unit falls, it may result in injury, death or property damage.

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Safety precautions

FOR INSTALLATION ⚠ WARNING

This appliance must be properly grounded. Do not ground the appliance to a gas pipe, plastic water pipe, or telephone line.

- ▶ Failure to do so may result in electric shock, fire, an explosion, or other problems with the product.
- ▶ Never plug the power cord into a socket that is not grounded correctly and make sure that it is in accordance with local and national codes.

FOR INSTALLATION ⚠ CAUTION

Install your appliance on a level and hard floor that can support its weight.

- ▶ Failing to do so may result in abnormal vibrations, noise, or problems with the product.

Install the draining hose properly so that water is drained correctly.

- ▶ Failing to do so may result in water overflowing and property damage.

When installing the outdoor unit, make sure to connect the draining hose so that draining is performed correctly.

- ▶ The water generated during the heating operation by the outdoor unit may overflow and result in property damage. In particular, in winter, if a block of ice falls, it may result in injury, death or property damage.
  ✻ (Applicable model: AF55JS✳MA✳)

Do not install the product in a place where thermo-hygrostat is needed (such as server room, machinery room, computer room, etc.)

- ▶ Those places does not provide guaranteed operation condition of the product therefore performance can be poor in these places.

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Do not install the product in a place where hair spray is frequently used (such as hair salon) since it decreases the hydrophilicity of the product's heat exchanger and cause dew formation on the surface of the product.

FOR POWER SUPPLY ⚠ WARNING

When the circuit breaker is damaged, contact your nearest service center.

Do not pull or excessively bend the power line. Do not twist or tie the power line. Do not hook the power line over a metal object, place a heavy object on the power line, insert the power line between objects, or push the power line into the space behind the appliance.

▶ This may result in electric shock or fire.

FOR POWER SUPPLY ⚠ CAUTION

When not using the air conditioner for a long period of time or during a thunder/lightning storm, cut the power at the circuit breaker.

▶ Failing to do so may result in electric shock or fire.

FOR USING ⚠ WARNING

If the appliance is flooded, please contact your nearest service center.

▶ Failing to do so may result in electric shock or fire.

If the appliance generates a strange noise, a burning smell or smoke, unplug the power plug immediately and contact your nearest service center.

▶ Failing to do so may result in electric shock or fire.

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Safety precautions

FOR USING | ⚠ WARNING

In the event of a gas leak (such as propane gas, LP gas, etc.), ventilate immediately without touching the power line. Do not touch the appliance or power line.

- ▶ Do not use a ventilating fan.
- ▶ A spark may result in an explosion or fire.

To reinstall the air conditioner, please contact your nearest service center.

- ▶ Failing to do so may result in problems with the product, water leakage, electric shock, or fire.
- ▶ A delivery service for the product is not provided. If you reinstall the product in another location, additional construction expenses and an installation fee will be charged.
- ▶ Especially, when you wish to install the product in an unusual location such as in an industrial area or near the seaside where it is exposed to the salt in the air, please contact your nearest service center.

Do not touch the circuit breaker with wet hands.

- ▶ This may result in electric shock.

Do not strike or pull the air conditioner with excessive force.

- ▶ This may result in fire, injury, or problems with the product.

Do not place an object near the outdoor unit that allows children to climb onto the machine.

- ▶ This may result in children seriously injuring themselves.

Do not turn the air conditioner off with the circuit breaker while it is operating.

- ▶ Turning the air conditioner off and then on again with the circuit breaker may cause a spark and result in electric shock or fire.

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After unpacking the air conditioner, keep all packaging materials well out of the reach of children, as packaging materials can be dangerous to children.

▶ If a child places a bag over its head, it may result in suffocation.

Do not insert your fingers or foreign substances into the outlet when the air conditioner is operating or the air flow blade is closing.

▶ Take special care that children do not injure themselves by inserting their fingers into the product.

Do not touch the air flow blade with your hands or fingers during the heating operation.

▶ This may result in electric shock or burns.

❋ (Applicable model: AF55JS✳MA✳)

Do not insert your fingers or foreign substances into the air inlet/outlet of the air conditioner.

▶ Take special care that children do not injure themselves by inserting their fingers into the product.

Do not use this air conditioner for long periods of time in badly ventilated locations or near infirm people.

▶ Since this may be dangerous due to a lack of oxygen, Open a window at least once an hour.

If any foreign substance such as water has entered the appliance, cut the power by unplugging the power plug and turning the circuit breaker off and then contact your nearest service center.

▶ Failing to do so may result in electric shock or fire.

Do not attempt to repair, disassemble, or modify the appliance yourself.

▶ Do not use any fuse (such as copper, steel wire, etc.) other than the standard fuse.

▶ Failing to do so may result in electric shock, fire, problems with the product, or injury.

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Safety precautions

FOR USING | **⚠ CAUTION**

Do not place objects or devices under the indoor unit.

▶ Water dripping from the indoor unit may result in fire or property damage.

Check that the installation frame of the outdoor unit is not broken at least once a year.

▶ Failing to do so may result in injury, death or property damage.

Max current is measured according to IEC standard for safety and current is measured according to ISO standard for energy efficiency.

Do not stand on top of the appliance or place objects (such as laundry, lighted candles, lighted cigarettes, dishes, chemicals, metal objects, etc.) on the appliance.

▶ This may result in electric shock, fire, problems with the product, or injury.

Do not operate the appliance with wet hands.

▶ This may result in electric shock.

Do not spray volatile material such as insecticide onto the surface of the appliance.

▶ As well as being harmful to humans, it may also result in electric shock, fire or problems with the product.

Do not drink the water from the air conditioner.

▶ The water may be harmful to humans.

Do not apply a strong impact to the remote controller and do not disassemble the remote controller.

Do not touch the pipes connected with the product.

▶ This may result in burns or injury.

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Do not use this air conditioner to preserve precision equipment, food, animals, plants or cosmetics, or for any other unusual purposes.

▶ This may result in property damage.

Avoid directly exposing humans, animals or plants from the air flow from the air conditioner for long periods of time.

▶ This may result in harm to humans, animals or plants.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

FOR CLEANING ⚠ WARNING

Do not clean the appliance by spraying water directly onto it. Do not use benzene, thinner, alcohol or acetone to clean the appliance.

▶ This may result in discoloration, deformation, damage, electric shock or fire.

Before cleaning or performing maintenance, unplug the air conditioner from the wall socket and wait until the fan stops.

▶ Failing to do so may result in electric shock or fire.

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Safety precautions

FOR CLEANING ⚠ CAUTION

Take care when cleaning the surface of the heat exchanger of the outdoor unit since it has sharp edges.

- ▶ To avoid cutting your fingers, wear thick cotton gloves when cleaning it.

Do not clean the inside of the air conditioner by yourself.

- ▶ For cleaning inside the appliance, contact your nearest service center.
- ▶ When cleaning the internal filter, refer to the descriptions in the 'Cleaning and maintaining the air conditioner' section.
- ▶ Failure to do may result in damage, electric shock or fire.

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Checking before use

Using indoor unit

Make sure that curtain does not block the air inlet.

▶ It may decrease cooling performance by blocking air circulation.

In Cool mode, set the appropriate desired temperature.

▶ If the desired temperature is too low, it may be harmful for human body and power consumption will also increase. Set the desired temperature about 5 ℃ lower than the outdoor temperature.

Use extra heating apparatus during heat mode.

▶ Heating performance of the air conditioner may decrease when the indoor•outdoor temperature drops. Therefore, use extra heating apparatus. (Applicable model: AF55JS✳MA✳ Series)

When cooling the room, use air conditioner and fan together to save energy.

▶ When the air conditioner is used with fan, cooling will be more effective and energy can be saved.

When the air conditioner is operating, close the doors and windows.

▶ When the air conditioner is used with doors and windows open, cooling/heating effect will decrease.

▶ If you use the air conditioner for over an hour, open the window to ventilate the air about once every hour.

Install the product away from sunlight or heating devices.

▶ Close the curtain when the sun shines.

▶ Do not use any heating devices during cooling operation. Cooling effect will decrease.

Storing the indoor unit

Dry the air conditioner thoroughly by operating Fan or Purity mode for 3 to 4 hours.

Stop the operation and disconnect the power plug.

CAUTION

• Do not move the product on your own. Pipe may get loose or damaged and cause refrigerant leakage.

Using outdoor unit

Take away any covers or barriers.

▶ It may cause product failure, and poor performance in cooling/heating by blocking air flow.

Installing outdoor unit

Install the outdoor unit in well ventilated area with no sunlight. If sunlight is unavoidable, install a sunshade.

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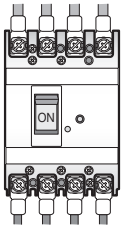
Checking before use

Checking auxiliary power switch

Turn on the auxiliary power switch which is installed separately.

1 phase circuit breaker

3 phase 4 wire circuit breaker



NOTE

Auxiliary power switch(ELCB, ELB)

- Auxiliary power switch is not included in the package. Purchase and install it separately.
- Auxiliary power switch is a device for preventing over-current or short circuit. Turn off the auxiliary power switch when you are cleaning the product or not going to use the product for long period of time.
- If ELB has already been installed in the switch box of the building, it is not mandatory for you to install the auxiliary power switch.

Operational temperature and humidity range

The table below indicates the temperature and humidity ranges the air conditioner can be operated within. Refer to the table for efficient use.

Mode	Indoor temperature	Outdoor temperature	Indoor humidity
COOLING	18 ℃ ~ 32 ℃	-15 ℃ to 52 ℃	Relative humidity 80% or less
HEATING	27 ˚C or less	-20 ℃ to 24 ℃	-
DRYING	18 ℃ ~ 32 ℃	-15 ℃ to 52 ℃	-

▶ If the air conditioner operates in cooling mode for long period of time in high humidity area, dew may be formed.

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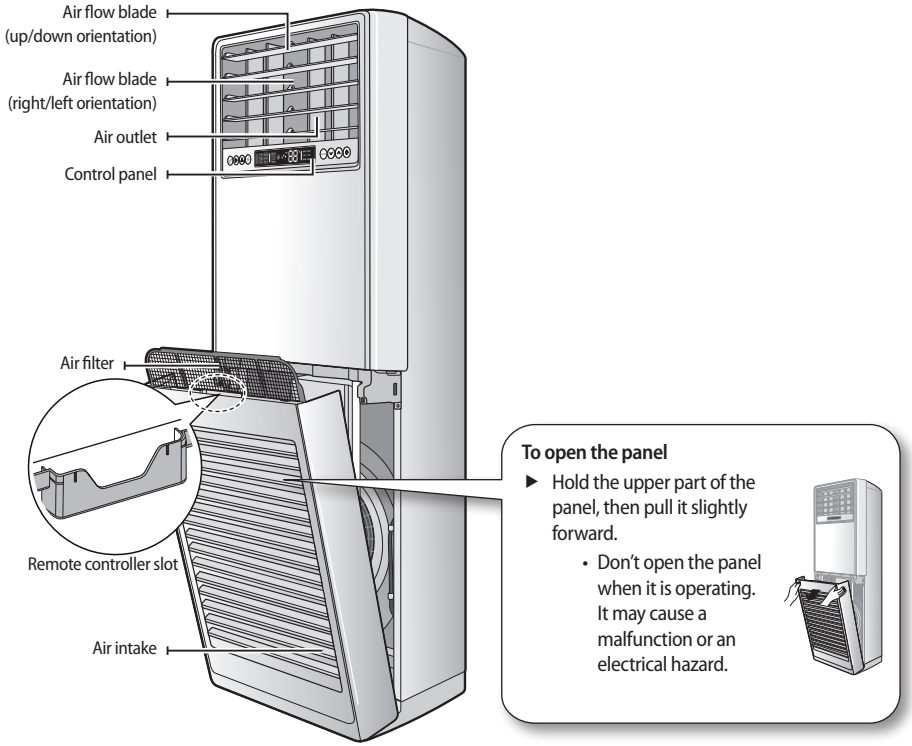
Checking the name of the parts

The picture and function of the indoor unit may be different depending on the model.

Main parts


Air flow blade
(up/down orientation)
Air flow blade
(right/left orientation)
Air outlet
Control panel
Air filter
Remote controller slot
Air intake
To open the panel
▶ Hold the upper part of the panel, then pull it slightly forward.
• Don't open the panel when it is operating. It may cause a malfunction or an electrical hazard.

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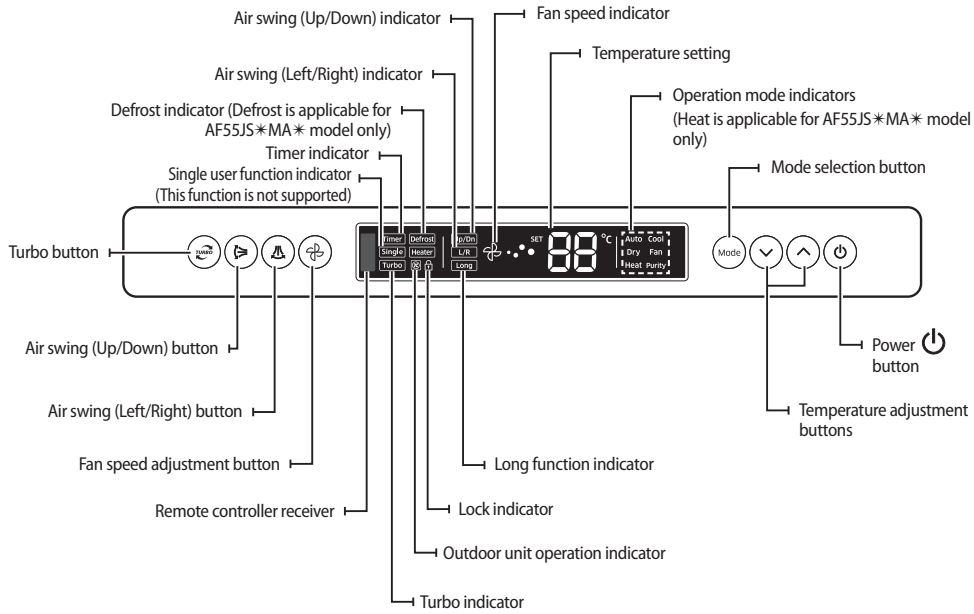
Checking the name of the parts

Control panel and the display

You can operate the air conditioner with the control panel when you can't or don't want to operate the air conditioner with the remote controller. (see page 27)



NOTE

- Single, Heater and Purity functions are not supported by this model.

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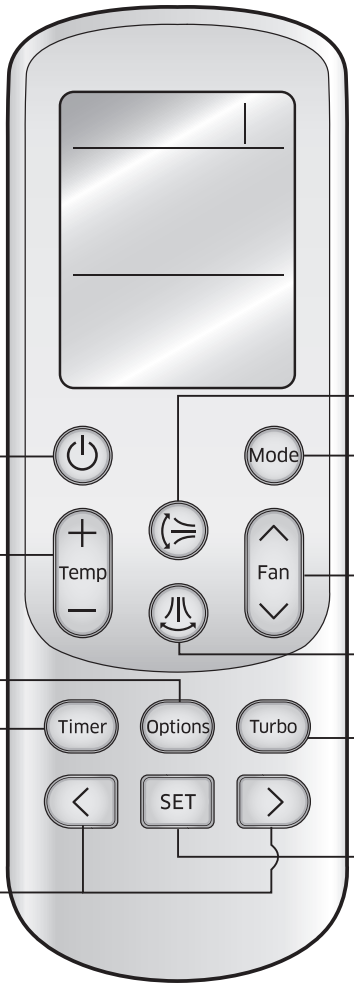
Checking the remote controller

Remote controller buttons

You can activate the air conditioner by pointing the remote controller away from it. When using the remote controller, always point it directly at the air conditioner.



Power
Turns the air conditioner on or off.

Temperature
Adjusts the temperature.

Options
Selects options during operation.

Timer
Sets timer option.

Direction
Moves to select and set an option.

Vertical air swing
Adjusts the air flow direction up and down (Not applicable to Duct type models).

Mode
Selects operation mode.

Fan speed
Adjusts the fan speed.

Horizontal air swing
Adjusts the air flow direction left and right.

Turbo
Sets the Turbo function.

SET
Selects or cancels an option.

NOTE

- When you press the button, a short ring will sound and a transmit indicator( )appears on the remote controller display.
- Remote controller will remember the most recent temperature setting if you turn off the air conditioner and then turn it on again.

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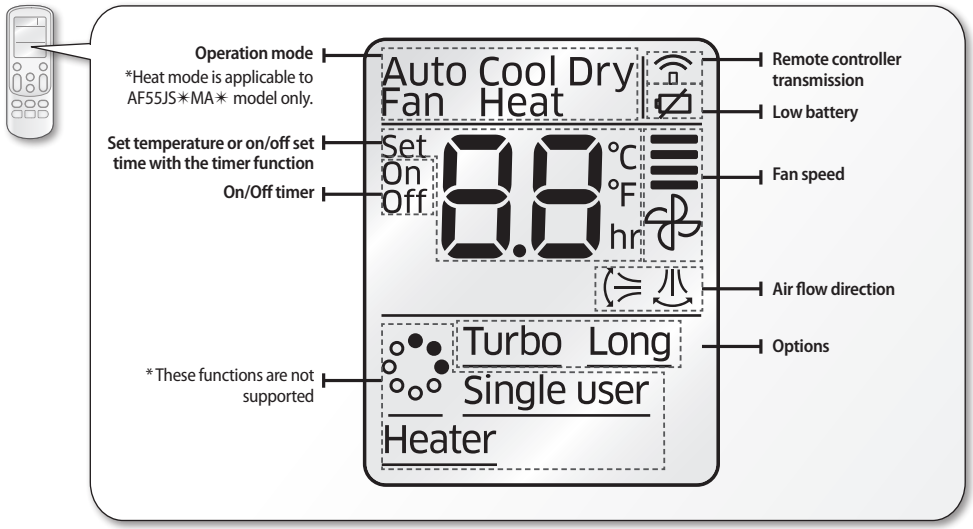
Checking the remote controller

Remote controller display



NOTE

- Single, Heater and Purity functions are not supported by this model.

Using the remote controller

Point the remote controller towards the remote controller receiver of the indoor unit (see page 16 to find the location of remote controller receiver).

When you properly press the button on the remote controller, you will hear ring sound from the indoor unit.

NOTE

- The signal may not be received well of electronic lighting style fluorescent lamps such as inverter fluorescent lamps are in the same space.
- If other electrical products operate by the remote controller, call your nearest contact center.

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Battery changing time

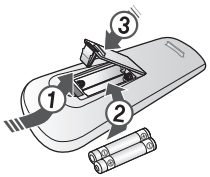
When the battery is exhausted,( )will be displayed in the remote controller display. When the icon appears, change the batteries. The remote controller requires two 1.5V AAA type batteries.

Storing the remote controller

When you do not use the remote controller for a long time, remove the batteries from the remote controller and store it in the remote controller holder.

Inserting the batteries

1. Open the battery cover.
▶ Push the ( ) part in the direction of the arrow and lift up the cover.
2. Insert the batteries.
▶ Check and match the (+), (-) signs and insert them in correct position.
3. Close the battery cover.
▶ Match the cover and bottom part of the remote controller and press it until you hear click sound.



CAUTION
- Make sure that water is not allowed to enter the remote controller.

NOTE
- There is a possibility that the air conditioner will not operate by remote controller near strong light such as a fluorescent lamp or neon sign. In this case, use the remote controller in front of the remote controller receiver of the indoor unit.
- If other electrical products are operated by the remote controller, call your nearest service center.

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Basic operation

Basic operation is an operation mode that can be selected by pressing the **Mode** button.

Auto

In Auto mode, the air conditioner will automatically set the Operation(Cool/Heat Mode) and fan speed depending on the room temperature detected by the room temperature sensor. (Heat mode is applicable to AF55JS✳MA✳ model only.)

Cool

Cool mode is frequently used and you can freely control the temperature, fan speed, and air flow direction in cool mode.

Dry

The air conditioner in Dry mode acts like a dehumidifier by removing moisture from the indoor air. The Dry mode will provide you with fresh air even on a rainy day.

- ▶ Outdoor unit will repeatedly and automatically turn on/off for maximum dehumidification according to the temperature difference of the current and desired temperature.

Fan

Fan mode can be selected to ventilate your room. Fan mode will be helpful to refresh the stale air in your room.

- ▶ If you are not going to use the air conditioner for a while, we recommend to operate the Fan mode for 3~4 hours to dry the internal part of the air conditioner..

Heat (Applicable model: AF55JS✳MA✳)

In Heat mode, the indoor temperature, fan speed, and air flow direction can be adjusted at your desire to warm your indoor.

- ▶ Indoor unit may not start the operation immediately until indoor heat exchanger is warmed up to a certain temperature (approximately 5 minutes according to current indoor temperature) to prevent generating a cold breeze.
- ▶ Defrost display: When removing frost at the outdoor unit in the Heat mode, (Defrost) icon will be displayed on the indoor unit display and it will be turned off after removing the frost.
  (When removing the frost during the defrost operation in Heat mode, steam may be generated and the warm breeze may not come out from the indoor unit.)

NOTE

- When the outdoor temperature is low and humidity is high, frost may form on outdoor unit's heat exchanger and may decrease the heating performance so the Defrost operation will operate for 5 ~ 12 minutes to get rid of the frost on the outdoor unit heat exchanger. Indoor unit will be off during Defrost operation is on since cold air may come out from it.
  - Intervals between Defrost operation cycle may vary depending on the amount of frost on the outdoor unit.
  - In snowy or rainy days, Defrost operation cycle may be shorter due to humidity.
  - You cannot control the air conditioner with the remote controller while Defrost operation is on. Try to control the air conditioner after Defrost operation is complete.

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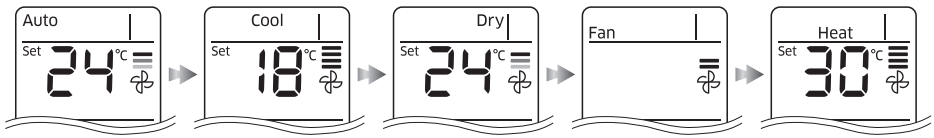
Turning on the power

Press the ⏻ button to turn on the air conditioner.

Selecting the operation mode

Press the Mode button to set the operation mode.



Selecting the fan speed

Press the Fan button to set the desired fan speed.

Auto	(Auto)
Cool	(Auto), (Med), (High), (Turbo)
Dry	(Auto)
Fan	(Med), (High), (Turbo)
Heat	(Auto), (Med), (High), (Turbo)

Adjusting the desired temperature

Press the Temp button to adjust the desired temperature.

Auto	Temperature can be adjusted by 1 ℃ within the range of 18 ℃~30 ℃.
Cool	Temperature can be adjusted by 1 ℃ within the range of 18 ℃~30 ℃.
Dry	Temperature can be adjusted by 1 ℃ within the range of 18 ℃~30 ℃.
Fan	Temperature cannot be adjusted.
Heat	Temperature can be adjusted by 1 ℃ within the range of 16 ℃ ~30 ℃.

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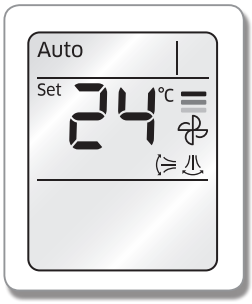
Basic operation

Selecting air flow direction

This function allows you to shift the air flow direction up and down or left and right.

Press the or button to move the air flow direction up and down or left and right while the air conditioner is turned on.



Remote controller display

▶ When the blade reaches the desired position, press the or button one more time to set the air flow direction. The up/down and left/right tilting of the blade will stop.

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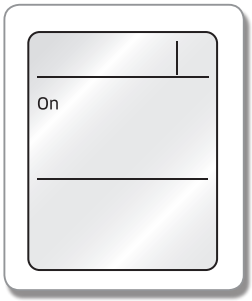
Setting the On/Off timer

You can set the air conditioner to turn on/off automatically at desired time.

Setting On timer while the air conditioner is off / Off timer while the air conditioner is on.

When the air conditioner is off;



Remote controller display

1. Press the **Timer** button to select (On).
   - (On) indicator starts to blink and you can set the time.
2. Press the < or > button to set the time.
   - You can set the time in 0.5 hour unit from 0.5 ~ 3 hours and 1 hour unit from 3~24 hours.
   - Time can be set from minimum 0.5 hours to maximum 24 hours.
3. Press the **SET** button to complete the On timer setting.
   - (On) indicator and the set time of the timer will be displayed on the remote controller display and the Timer indicator (Timer) will be displayed on the indoor unit display.
   - On timer setting will be cancelled if you don't press the **SET** button within 10 seconds after setting the time. Therefore check for the (On) indicator on the remote controller display and the Timer indicator (Timer) on the indoor unit display.

Cancel
- ▶ Press the **Timer** button → Select (On) → Press the < or > button → Set the time to 0.0 → Press the **SET** button.
- ▶ Press the **Power** ⏻ button.

Additional options available in On timer	
Mode	You can select from (Auto) → (Cool) → (Dry) → (Fan) → (Heat).
Temp	You can set the temperature after selecting the operation mode. Temperature adjustment is available when Auto/Cool/Dry /Heat mode is selected.

NOTE

- After 3 seconds from the completion of the On timer setting, only (On) indicator will remain on the remote controller display.
- You cannot set the fan speed when setting the On timer.
- If you press the **Power** ⏻ button on the indoor unit after setting the On timer function with the remote controller, Timer indicator (Timer) on the indoor unit display will disappear and the function will be canceled. However, (On) indicator on the remote controller will remain on but the function will not work.

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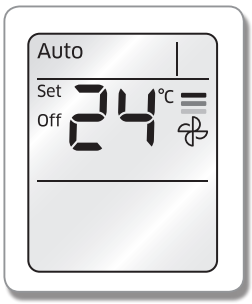
Setting the On/Off timer

When the air conditioner is on;



1. Press the **Timer** button to select (Off).
   - (Off) indicator starts to blink and you can set the time.
2. Press the < or > button to set the time.
   - You can set the time in 0.5 hour unit from 0.5 ~ 3 hours and 1 hour unit from 3~24 hours.
   - Time can be set from minimum 0.5 hours to maximum 24 hours.
3. Press the **SET** button to complete the Off timer setting.
   - (Off) indicator and the set time of the timer will be displayed on the remote controller display and the Timer indicator (Timer) will be displayed on the indoor unit display.
   - Off timer setting will be cancelled if you don't press the **SET** button within 10 seconds after setting the time. Therefore check for the (Off) indicator on the remote controller display and the Timer indicator (Timer) on the indoor unit display.

Cancel ▶ Press the **Timer** button → Select (Off) → Press the < or > button → Set the time to 0.0 → Press the **SET** button.

Combining On Timer and Off Timer	
When the air conditioner is off	**When the air conditioner is on**
When set time on On timer is shorter than Off timer Ex) On timer: 3 hours, Off timer: 5 hours - The air conditioner will turn on after 3 hours from the moment you have set the timer and the air conditioner will remain on for 2 hours and then turn off automatically.	When set time on On timer is longer than Off timer Ex) On timer: 3 hours, Off timer: 1 hour - The air conditioner will turn off after 1 hour from the moment you have set the timer and turn on after 2 hours from the moment it was turned off.

NOTE
- Set time for the On timer and the Off timer should be different from each other.
- When the On timer or the Off timer is set, setting can be cancelled by pressing the **Power** ⏻ button.

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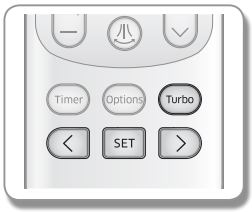
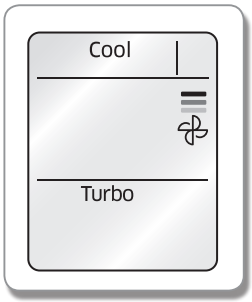
Using the Turbo function

You can set the Turbo function to provide fast and powerful cooling (heating).

When the air conditioner is operating in Cool or Heat mode;





Remote controller display

1. Press the **Turbo** button.
   - (Turbo) will be displayed and the function will operate for 30 minutes.

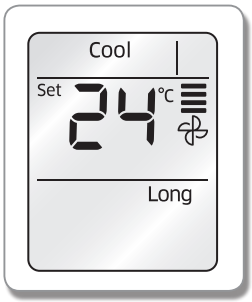
Cancel ▶ Press the **Turbo** Button.

NOTE

- Turbo function is only available in Auto/Cool/Heat mode* and the air conditioner will return to its previous operation mode after operating for 30 minutes in this function. (*Heat mode is applicable for AF55JS✳MA✳.)
- Air flow direction can be adjusted.
- Temperature and fan speed cannot be adjusted.
- If you select the Turbo function while Long/Single user function is on, corresponding function will be cancelled.
- You can also turn on/off the Turbo function with the **Options** button.
  1) Press the **Options** button.
  2) Press the <, > or **Options** button until (Turbo) indicator starts to blink.
  3) Press the **SET** button to set the Turbo function.

Using the Long function

Long function will be helpful when you want the cool air to go to much further place.



Remote controller display

1. Press the **Options** button.
2. Press the < , > or **Options** button until (Long) indicator starts to blink.
3. Press the **SET** button to set the Long function.
   - (Long) will blink first, then remain on the display as (Long) and the function will begin.

Cancel ▶ Press the **Options** button and then <, > or **Options** button to make the (Long) indicator blink and press the **SET** button.

NOTE

- You cannot select the Long function and the Turbo function simultaneously.
- You can only adjust horizontal (left and right) air swing.
- You cannot adjust the fan speed.
- You cannot set the Long function while operating in Dry/Fan mode.

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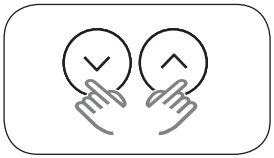
Locking the control panel

You can lock the control panel on the indoor unit to prevent the children from playing with the air conditioner.

Press the **Temp** ∨ and ∧buttons for 3 seconds.

- ▶ You will hear ring and the Lock (🔒) icon will appear on the indoor unit display.
- ▶ Once Lock is set, you cannot control the air conditioner with the control panel but you can only control it with the remote controller. Therefore this function will be useful to keep the children away from touching the control panel.
- ▶ To unlock the control panel, press the **Temp** ∨ and ∧buttons again for 3 seconds.



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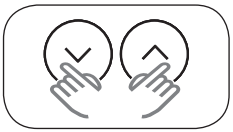
Using the air conditioner with the control panel

You can control the air conditioner without the remote controller.

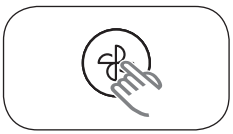
1. Press the **Power** ⏻ button on the indoor unit control panel.
▶ The air conditioner will turn on with ringing sound.

Stop To turn off the air conditioner, press the Power ⏻ button again.

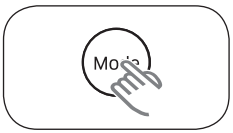
2. Press the **Temp** ∨ and ∧ button to adjust the temperature.
▶ You can increase/decrease the temperature by 1 ℃.



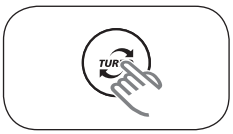
3. Press the **Fan Speed** button to adjust the fan speed.
▶ Each time you press the **Fan Speed** button, the fan speed will change in order of Medium( ), High( ), Turbo( ) and Auto( ).



4. Press the **Mode** button to select the operation mode.
▶ You can select operation mode you want by pressing the **Mode** button.
▶ Each time you press the **Mode** button, the mode will change in order of Auto, Cool, Dry, Fan and Heat*. (*Heat mode is applicable for AF55JS✳MA✳ model only.)



5. Press the **Turbo** button to select Turbo mode.



6. Press the **Vertical air swing** button to adjust vertical air flow direction.

7. Press the **Horizontal air swing** button to adjust vertical air flow direction.

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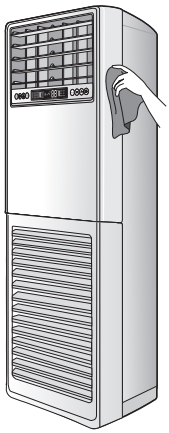
Cleaning and maintaining the air conditioner

CAUTION
- Make sure the power is turned off and unplugged from the wall socket when cleaning the air conditioner.

Cleaning the indoor unit

- Wipe the surface of the unit with a slightly wet or dry cloth when needed.
- Brush away the dust on the narrow gap of air conditioner.



NOTE
- If it is difficult to clean the indoor unit heat exchanger on your own, contact service center.
- Depending on the usage environment(restaurant, hair salon etc.), odor may be generated. Prevent the odor by cleaning the air filter or performing Fan mode while ventilating your room. If you have a problem with the odor, contact a service center.

CAUTION
- Do not clean the display using alkaline detergent.
- Do not use sulfuric acid, hydrochloric acid, organic solvents(such as thinner, kerosene and acetone etc.) to clean the surface of the product or put any stickers on it. They may damage the surface of the air conditioner.

Cleaning the outdoor unit heat exchanger

- When dust accumulates on the heat exchanger, it may decrease cooling performance. Therefore, clean it regularly.
- Spray water to clean the dust.

NOTE
- If it is too difficult to clean the outdoor unit heat exchanger on your own, contact service center.

CAUTION
- Be careful with the sharp edges on the outdoor unit heat exchanger.

Heat exchanger

(Illustration may differ slightly depending on the models.)

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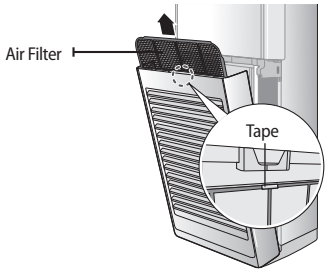
Cleaning the Air filter

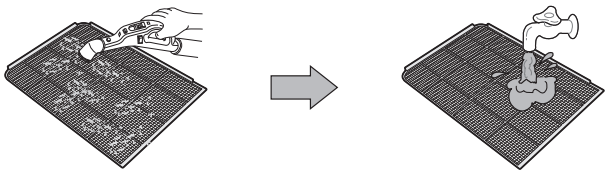
Washable air filter captures large particles from the air.

The filter can be cleaned with a vacuum or by hand washing.

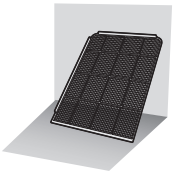
1. Open the panel and pull out the air filter after removing the tape that holds the air filter.
   Pull out the air filter in the direction of the arrow as shown in the below figure.



2. Clean the air filter with a vacuum cleaner or in running water.
   If dust is too heavy, use warm water mixed with detergent. Do not scrub the filter too hard since it may get damaged.



3. Dry the air filter in a ventilated area.
   Do not dry the air filter in a place with direct sunlight.



4. Insert the air filter back in its original position. Make sure it is firmly fixed.

NOTE

- Clean the air filter every two weeks. Cleaning term may differ depending on usage and environmental conditions.

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Cleaning and maintaining the air conditioner

Maintaining your air conditioner

If the air conditioner will not be used for an extended period of time, dry the air conditioner to maintain it in best condition.

1. Dry the air conditioner thoroughly by operating in Fan mode for 3 to 4 hours and turn off the circuit breaker. There may be internal damage if moisture is left in components.
2. Before using the air conditioner again, dry the inner components of the air conditioner again by running in Fan mode for 3 to 4 hours. This helps remove odors which may have generated from dampness.

Periodical checks

Refer to the following chart to maintain the air conditioner properly.

Type	Description	Every 2 weeks	Every 3 months	Every 4 months	Once a year
Indoor unit	Clean the air filter (1)	●			
	Clean the condensate drain pan (2)				●
	Thoroughly clean the heat exchanger (2)				●
	Clean the condensate drain pipe (2)			●	
	Replace the remote controller batteries (1)				●
Outdoor unit	Clean the heat exchanger on the outside of the unit (2)			●	
	Clean the heat exchanger on the inside of the unit (2)				●
	Clean the electric components with jets of air (2)				●
	Verify that all the electric components are firmly tightened (2)				●
	Clean the fan (2)				●
	Verify that all the fan assembly is firmly tightened (2)				●
	Clean the condensate drain pan (2)				●

● : This check mark requires checking the indoor/outdoor unit periodically, following to the description to maintain the air conditioner properly.

CAUTION

- The checks and maintenance operations described are essential to guarantee the efficiency of the air conditioner. The frequency of these operations varies according to the characteristics of the area, the amount of dust, etc.
  1) The described operations should be performed more frequently if the area of installation is very dusty.
  2) These operations must always be performed by qualified personnel. For more detailed information, see the Installation part.

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Internal protections via the unit control system

This internal protection operates if an internal fault occurs in the air conditioner.

Type	Description
Against cold air	The internal fan will be off to against cold air when the heat pump is heating.
Defrost cycle	The internal fan will be off to against cold air when the heat pump is heating.
Protect compressor	The air conditioner does not start operating immediately to protect the compressor of the outdoor unit after it has been started.

NOTE

- If the heat pump is operating in Heat mode, defrost cycle is actuated to remove frost from an outdoor unit that may have deposited at low temperatures.
- The internal fan is switched off automatically and restarted only after the defrost cycle is completed.

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Troubleshooting

PROBLEM	SOLUTION
The air conditioner does not work at all.	• Check power status and then operate the air conditioner again. • Check whether the power plug is connected correctly or the auxiliary power switch is switched on. • If the air conditioner is switched off by the Timer function, press the **Power** ⏻ button.
The temperature adjustment is not working.	• Temperature adjustment is not available when the air conditioner is operating in Fan mode or Turbo/Purity function is selected..
Cool air does not come out of the air conditioner.	• Check if the set temperature is higher than the current temperature. Press the **Temp +** or **-** button on the remote controller to set the temperature lower than the current temperature. • Check if the air filter is blocked by dirt. If there is a lot of dust on the Air filter, cooling performance may decrease. Clean them frequently. • Check if the outdoor unit is covered or installed near the obstacle. Take the cover off and take the obstacle away. • Check if the indoor unit is installed in a place with direct sunlight (in Cooling operation). Close the curtain or blind to cover the sunlight. • If the doors or windows are open, it may cause poor cooling performance. Close the doors and windows.

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PROBLEM	SOLUTION
Cool air does not come out of the air conditioner.	• Cool air will not come out if the air conditioner is operating in Fan mode or if you have selected Purity function individually. Press the **Mode** button to select other operation mode. • Cool air will not come out when current room temperature has reached the desired temperature. Also, cool air will not come out for 3 minutes if the air conditioner has been just turned on. • Cool air may not come out depending on the temperature condition of the heat exchanger when current room temperature has reached the desired temperature. • When the pipe length exceeds maximum allowable pipe length, cooling performance may decrease.
Cannot change the air flow direction	• Only horizontal (left/right) air flow direction can be adjusted, when Long function is selected.
Fan speed adjustment is not working.	• Check if you have selected Auto/Dry mode or Turbo/Long function. If you have, selected these modes or functions, you cannot adjust the fan speed because fan speed is set to Auto.
Remote controller is not working	• Replace the exhausted batteries with new ones. • Do not block the remote controller receiver. • If the remote controller is used near strong light (3-wavelength fluorescent light, neon sign etc.), the remote controller may not work due to the electronic jamming signal

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Troubleshooting

PROBLEM	SOLUTION
Timer function is not working.	• Check if you have finalized the setting by pressing the **Set** button. If you haven't, you need to set the timer again and press the **Set** button.
Odors permeate in the room during operation.	• Odor may permeate depending on the surrounding environment or operating condition. Ventilate the indoor air or operate Fan mode for 1~2 hours if the odor does not go away. (Parts of the air conditioner does not generate any odor) • Clean the air filter if it is dirty.
Error is indicated.	• If you see E1-01, E2-01, E2-02, on the indoor unit display, check the connection of the power and communication cable between the indoor and outdoor unit and restart the power. If you keep seeing the error, please contact the service center. • If you see E1-21, E1-22, E1-54, E1-62, E1-63, E1-98, E2-03, E2-21, E2-31, E2-51, E3-20, E4-03, E4-04, E4-16, E4-22, E4-40, E4-41, E4-58, E4-61, E4-62, E4-63, E4-64, E4-65, E4-66, E4-67, E4-68, E4-71, E4-74, E4-75, E4-84, E5-00, E5-54, E5-56 blink on the indoor unit display, it means there is a problem so you should contact a service center.

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PROBLEM	SOLUTION
Noise is generated.	• Depending on the status of the air conditioner usage (especially when the outdoor temperature is below 20 °C), noise can be generated due to changes in refrigerant flow. You don't have to worry since it is normal.
Water is dropping from the connection part of the outdoor unit's pipes.	• Water may be generated because of the temperature difference. It is normal.

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Safety precautions

Carefully follow the precautions listed as below because they are essential to guarantee the safety of SAMSUNG product.

WARNING

- Always disconnect the air conditioner from the power supply before servicing it or accessing its internal components.
- Verify that installation and testing operations are performed by qualified personnel.
- Verify that the air conditioner is not installed in an easily accessible area.

General information

- Carefully read the content of this manual before installing the air conditioner and store the manual in a safe place in order to be able to use it as reference after installation.
- For maximum safety, installers should always carefully read the following warnings.
- Store the manual in a safe location and remember to hand it over to the new owner if the air conditioner is sold or transferred.
- This manual explains how to install an indoor unit with a split system with two SAMSUNG units. The use of other types of units with different control systems may damage the units and invalidate the warranty. The manufacturer shall not be responsible for damages arising from the use of non compliant units.
- The manufacturer shall not be responsible for damage originating from unauthorized changes or the improper connection of electric and hydraulic lines. Failure to comply with these instructions or to comply with the requirements set forth in the "Operating limits" table, included in the manual, shall immediately invalidate the warranty.
- The air conditioner should be used only for the applications for which it has been designed: the indoor unit is not suitable to be installed in areas used for laundry.
- Do not use the units if damaged. If problems occur, switch the unit off and disconnect it from the power supply.
- In order to prevent electric shocks, fires or injuries, always stop the unit, disable the protection switch and contact SAMSUNG's technical support if the unit produces smoke, if the power cable is hot or damaged or if the unit is very noisy.
- Always remember to inspect the unit, electric connections, refrigerant tubes and protections regularly. These operations should be performed by qualified personnel only.
- The unit contains moving parts, which should always be kept out of the reach of children.
- Do not attempt to repair, move, alter or reinstall the unit. If performed by unauthorized personnel, these operations may cause electric shocks or fires.
- Do not place containers with liquids or other objects on the unit.
- All the materials used for the manufacture and packaging of the air conditioner are recyclable.
- The packing material and exhaust batteries of the remote controller(optional) must be disposed of in accordance with current laws.
- The air conditioner contains a refrigerant that has to be disposed of as special waste. At the end of its life cycle, the air conditioner must be disposed of in authorized centers or returned to the retailer so that it can be disposed of correctly and safely.

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Installing the unit

IMPORTANT : When installing the unit, always remember to connect first the refrigerant tubes, then the electrical lines. Always disassemble the electric lines before the refrigerant tubes.

- Upon receipt, inspect the product to verify that it has not been damaged during transport. If the product appears damaged, DO NOT INSTALL it and immediately report the damage to the carrier or retailer (if the installer or the authorized technician has collected the material from the retailer).
- After completing the installation, always carry out a functional test and provide the instructions on how to operate the air conditioner to the user.
- Do not use the air conditioner in environments with hazardous substances or close to equipment that release free flames to avoid the occurrence of fires, explosions or injuries.
- Our units must be installed in compliance with the spaces indicated in the manual to ensure either accessibility from both sides or ability to perform routine maintenance and repairs. The units' components must be accessible and that can be disassembled in conditions of complete safety either for people or things. For this reason, where it is not observed as indicated into the manual, the cost necessary to reach and repair the unit (in safety, as required by current regulations in force) with slings, trucks, scaffolding or any other means of elevation won't be considered in-warranty and charged to end user.

Power supply line, fuse or circuit breaker

- Always make sure that the power supply is compliant with current safety standards. Always install the air conditioner in compliance with current local safety standards.
- Always verify that a suitable grounding connection is available.
- Verify that the voltage and frequency of the power supply comply with the specifications and that the installed power is sufficient to ensure the operation of any other domestic appliance connected to the same electric lines.
- Always verify that the cut-off and protection switches are suitably dimensioned.
- Verify that the air conditioner is connected to the power supply in accordance with the instructions provided in the wiring diagram included in the manual.
- Always verify that electric connections (cable entry, section of leads, protections…) are compliant with the electric specifications and with the instructions provided in the wiring scheme. Always verify that all connections comply with the standards applicable to the installation of air conditioners.

CAUTION

- Make sure that you earth the cables.
  - Do not connect the earth wire to the gas pipe, water pipe, lighting rod or telephone wire. If earthing is not complete, electric shock or fire may occur.
- Install the circuit breaker.
  - If the circuit breaker is not installed, electric shock or fire may occur.
- Make sure that the condensed water dripping from the drain hose runs out properly and safely.
- Install the power cable and communication cable of the indoor and outdoor unit at least 1m away from the electric appliance.
- Install the indoor unit away from lighting apparatus using the ballast.
  - If you use the wireless remote controller, reception error may occur due to the ballast of the lighting apparatus.
- Do not install the air conditioner in following places.
  - Place where there is mineral oil or arsenic acid. Resin parts flame and the accessories may drop or water may leak. The capacity of the heat exchanger may reduce or the air conditioner may be out of order.
  - The place where corrosive gas such as sulfurous acid gas generates from the vent pipe or air outlet. The copper pipe or connection pipe may corrode and refrigerant may leak.
  - The place where there is a machine that generates electromagnetic waves. The air conditioner may not operate normally due to control system.
  - The place where there is a danger of existing combustible gas, carbon fiber or flammable dust. The place where thinner or gasoline is handled. Gas may leak and it may cause fire.

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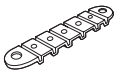
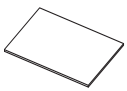
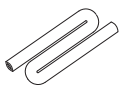
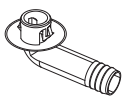
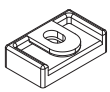
Accessory parts list

✻ Product illustration may look different from the actual product.

No.	Part Name	Quantity		Remarks
1	Fixing bracket for indoor unit 	1		Indoor unit
2	Remote controller	1		
3	Remote controller holder	1		
4	M4 X L12 screws	4		
5	M4 X L14 screws	4		
6	Batteries for remote controller	2		
7	Protective piping cover	1		
8	Insulation for piping 	1		
9	Insulation for drain hose 	1		
10	User and Installation manual	1		
11	Cap-Drain	5 (AF55JS✳MAEEX)	3 (AF55JV✳MAEEX)	Outdoor unit
12	Drain-Plug Out 	2 (AF55JS✳MAEEX)	1 (AF55JV✳MAEEX)	
13	Rubber-Leg 	4		

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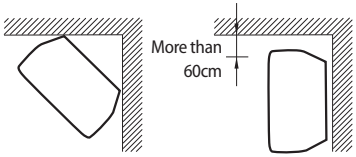
Selection of installation place

Indoor unit

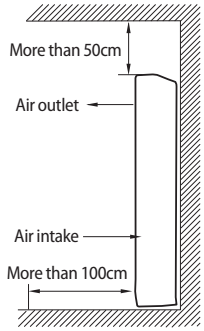
- Install the unit at a place close to the wall facing the outside as it is necessary to perform piping connection with the outdoor unit.
  - It is effective to install the unit at a window side to ensure uniform distribution of indoor temperature.
- Install the unit at a place where there is no obstacle against the wind around the air intake and air outlet.
- Install the unit horizontally at a stable, rigid place. (When installing the unit at a place subjected to oscillation, noise may occur.)
- Avoid a place near the door which is frequented by people.
- Avoid a place subject to direct sunlight.

Top view



[Corner installation] [Wall installation]

Side view

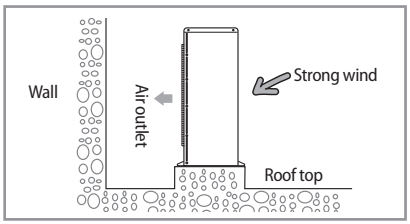


Outdoor unit

- A place free from the risk of combustible gas leakage.
- A place which can bear the weight of the unit.
- A place which can bear the fixing strength of the outdoor unit.
- Avoid a place subject to oil (including machine oil).
- Avoid a saline place.
- Avoid a place subject to sulfide gas (hot spring zone). (When installing the unit at such special environmental conditions, it may cause machine trouble. When it is unavoidable to use such places. It requires special maintenance.)
- A place where the discharge air and noise of the outdoor unit do not disturb the neighborhood. (Take special care not to cause any inconvenience to your neighbors when installing the unit on the borderline with your neighborhood.)
- A place where strong wind does not head against the air outlet of the outdoor unit. (If a strong wind heads directly against the air outlet at the time of cool operation, a safety device can be operated.)
- Do not install the outdoor unit at an unstable place such as outer wall of an apartment or building. The outdoor unit may fall down, causing severe personal or property damage or loss.

✻ If there is any unavoidable reason to install the unit at such a place, take the following measures against the wind;

1) When installing the unit at a roadside concentrated with buildings, install it parallel with the road.
2) Install the unit so that the air outlet faces toward the wall at a place such as rooftop, which may be subjected to strong wind.



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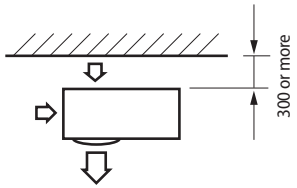
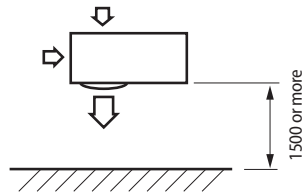
Selection of installation place

Single installation

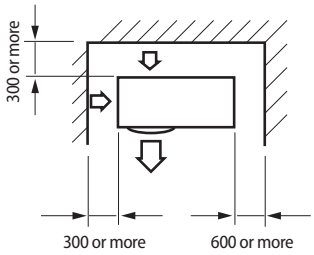
(Unit : mm)



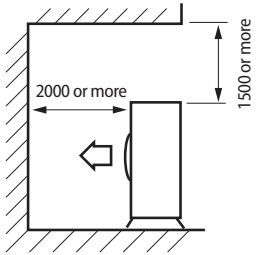
✻ When the air outlet is opposite the wall



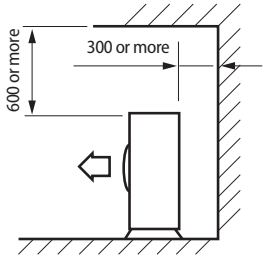
✻ When the air outlet is towards the wall



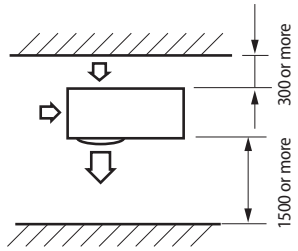
✻ When 3 sides of the outdoor unit are blocked by the wall



✻ The upper part of the outdoor unit and the air outlet is towards the wall



✻ The upper part of the outdoor unit and the air outlet is opposite the wall



✻ When front and rear side of the outdoor unit is towards the wall

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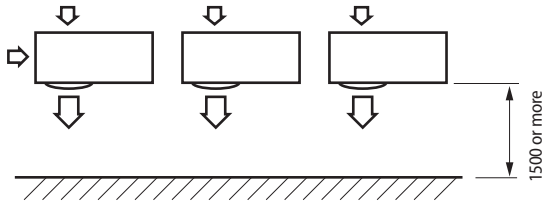
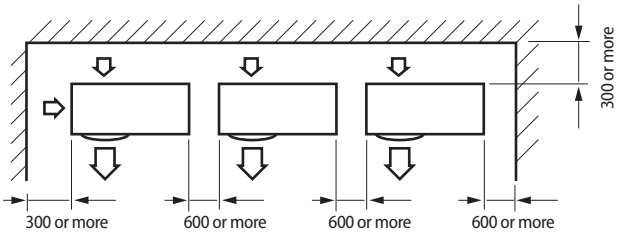
When installing more than 1 outdoor unit

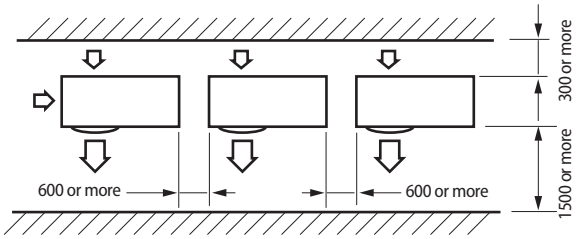
(Unit : mm)



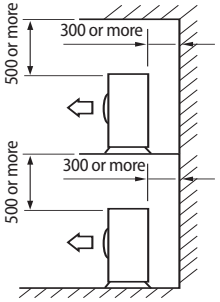
✻ When the air outlet is towards the wall



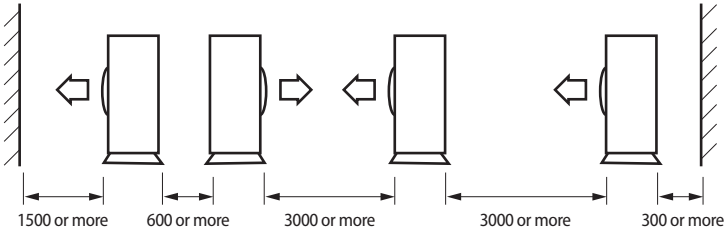
✻ When 3 sides of the outdoor unit are blocked by the wall



✻ When front and rear side of the outdoor unit is towards the wall



✻ When the upper part of the outdoor unit and the air outlet is opposite the wall



✻ When front and rear side of the outdoor unit is towards the wall

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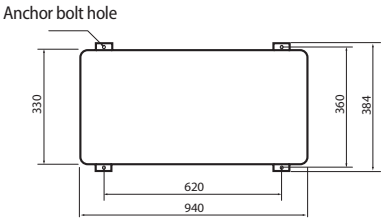
Selection of installation place

Outdoor unit base mount and anchor bolt position

Fix the outdoor unit with anchor bolts.

NOTE
- The anchor bolt must be 20mm or higher from the base surface.

(Unit : mm)



CAUTION
- Make a drain outlet around the base for outdoor unit drainage.
- If the outdoor unit is installed on the roof, you have to check the ceiling strength and waterproof the unit.

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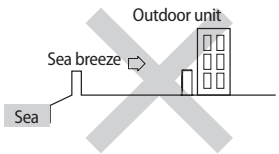
Preparing the installation

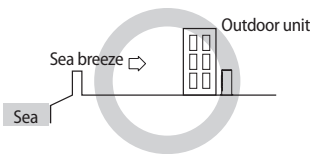
Selecting appropriate location for installation

Decide the installation location based on the following condition and obtain the user's approval.

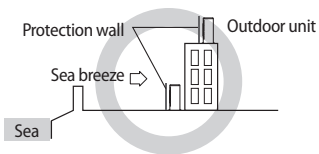
- ▶ Avoid a place that may disturb your neighbor. Noise may occur from the outdoor unit and the discharged air may run into the neighborhood. (Be careful of the operation time in a residential area)
- ▶ Install the outdoor unit on a hard and even area that can support its weight.
- ▶ Choose a flat place that rainwater does not settle or leak.
- ▶ Choose a place avoiding strong winds.
- ▶ Maintain sufficient space for repairs and service.
- ▶ Choose a place where you can easily connect the pipes and cables to the indoor unit.
- ▶ Make sure that the condensed water dripping from the drain hose runs out properly and safely.
- ▶ When installing the outdoor unit near seashore, make sure it is not directly exposed to sea breeze. If you can not find a adequate place without direct see breeze, protection wall should be constructed.

▶ Install the outdoor unit in a place (such as near buildings etc.) where it can be prevented from sea breeze which can damage the outdoor unit.





▶ If you cannot avoid installing the outdoor unit by the seashore, construct a protection wall around to block the sea breeze.



- Protection wall should be constructed with a solid material such as concrete to block the sea breeze and the height and the width of the wall should be 1.5 times larger than the size of the outdoor unit. Also, secure over 700 mm between the protection wall and the outdoor unit for exhausted air to ventilate.

▶ Install the outdoor unit in a place where water can drain smoothly.

❋ If you cannot find a place satisfying above conditions, please contact manufacturer. Make sure to clean the sea water and the dust on the outdoor unit heat exchanger and spread corrosion inhibitor on heat exchanger. (At least one time per one year.)

- ▶ Choose a place where there is no direct sunlight.
- ▶ Choose a place where it could not come into contact with snow and rain.
- ▶ Choose a place where flammable gas does not leak.
- ▶ Choose a place where the indoor and outdoor unit can be connected with a pipe.

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Preparing the installation

WARNING

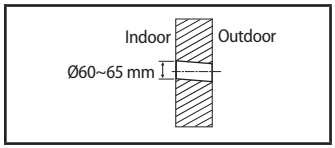
- After installing the outdoor unit, apply rust inhibitor on the internal pipes and heat exchanger.
  - If you don't apply rust inhibitor, airborne corrosive gas (such as sulfur compounds, hydrogen sulfide and ammonia) and salty dust may cause pipe corrosion which will lead to refrigerant leakage.
  - Inspect the outdoor unit at least once a year and re-apply the rust inhibitor where it is damaged (worn out).
- When applying the rust inhibitor, please be aware of the following:
  - Turn off the power before spraying the rust inhibitor.
  - Wear protective goggles and mask before spraying.
  - Clean the dusty surface with clean fabric or paper before spraying.
  - Make sure that wind is blowing from worker's back when spraying.
  - Do not spray on the PCB panel and electric parts.

CAUTION

- Install the indoor unit away from any interfering sources such as radio, computer, stereo equipment and also select the place where the electrical wiring work can be possible.
  - Especially keep the unit at least 3m away from the electrical equipment in an area electromagnetic waves generated and install the protection tube to protect the main power cable and communication cable.
  - Make sure that there is no equipment electromagnetic waves generate. If not, malfunction of the control system may occur due to the effect of the electromagnetic wave. (For example: The remote control sensor of the indoor unit may not be received well of electronic lighting style fluorescent lamps, such as fluorescent lamps are in the same space when using a remote control.)
- Make sure to install the outdoor unit in a safe place where snowfall will not be obstructed. The frame should be installed in a place where the air inlet and heat exchanger of the unit are not buried in the snow.
- A ventilation system may be required in the case the outdoor unit is installed in a closed space or room, even though R-410A is not poisonous or flammable.
- Install the railing around the outdoor unit to prevent falling when the unit is installed at high place of roof on the building.
- Avoid installing the units in places such as an exhaust pipe and ventilating opening exposed to corrosive gas, oxides of sulfur, ammonia gas or sulfur gas herbicides. (These places need additional anticorrosive treatments. Please contact manufacture to avoid corroding copper pipes or soldered parts)
- According to the condition of power supply, electric noise or unstable voltage can occur malfunction of electric parts or control system. (At the ship or places using power supply from electric generator… etc)

Drilling a hole in a wall

▶ Drill a hole at a slightly downward slant (15˚) with a diameter of 60~65 mm.



Space requirements

▶ The space suggested below is based on operating condition of outdoor temperature of 35 ℃. If operating condition of outdoor temperature is higher than 35 ℃, try to have more space.

▶ Make sure to clear a passage for a person and air flow.

▶ Observe the clearances and dimensions as seen below when installing the outdoor unit.

▶ If you install several outdoor units at the same place, observe the space for ventilation and free airflow.

▶ If the space for ventilation is insufficient, the air conditioner may not generate performance designed. Keep in mind that SAMSUNG logo is located on the front side of outdoor unit.

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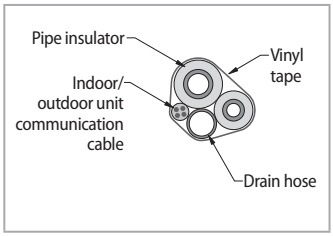
Installing the air conditioner

Refrigerant pipe work

Insulating the pipes



- Make sure to insulated the refrigerant pipes with an insulation tape. If the pipe is not insulated, condensate may form and drop into the indoor.
- Wind the refrigerant pipes and the drain hose with vinyl tapes.
- When you bend the pipe, try to secure large bending radius (over 100 mm) to prevent the copper pipe from distorting.
- Use foamed polyethylene or EPDM foam, with thickness over 7 mm, as an insulator.
- If the pipe is installed in a place with humidity over 80 % (such as within a pit of a building, basement, sea shore, near hot spring or lake etc), use an insulator with a thickness over 10 mm.
- Insulate the high pressure (liquid pipe)/low pressure (gas pipe) pipe, and finish it by winding up the vinyl tape around it.
- Make sure to insulate the pipe with no gap or cracks, and use adhesive between the connection part of the insulator to prevent moisture from entering.
- Make sure that the thickness of the insulator doesn't get thinner on the bending part of the pipes.
- Use extra insulator to secure thickness when the insulator becomes thinner.
- When the pipe hanger is installed, wind the extra PE Foam type insulator (over 5 mm) with the width 3 times wider than the hanger. (Do not use cable tie as an hanger.)

Oil trap

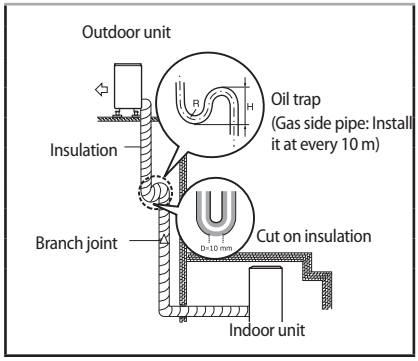
Check the following list and install an oil trap.

- Install an oil trap only when the outdoor unit is at a higher level than the indoor unit.
- Based on cooling operation, install it on the gas side pipe only.
- Install the oil trap only in between the outdoor unit and the first branch joint and it should be installed at every 10 m.
- Radius of curvature (R) on the oil trap are as follows:

(Unit: mm)

Pipe diameter (D)	Radius of curvature (R)
12.70	25 and over
15.88	32 and over
19.05	38 and over
22.23	41 and over
25.40	51 and over
28.60	57 and over
31.75	60 and over

- Height of the oil trap (H): $4R \leq H \leq 6R$



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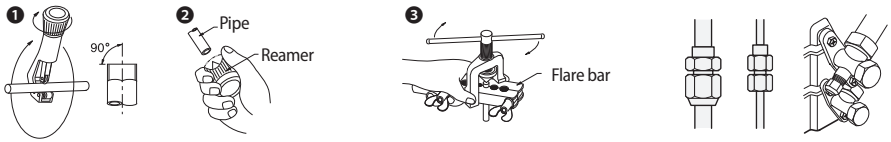
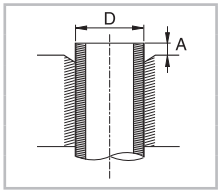
Installing the air conditioner

Refrigerant piping work

1. Cut the pipe with a pipe cutter ensuring that the cut edge remains flat and then remove all the burrs.
2. Make sure that the flared pipe doesn't have uneven thickness, damaged and cracked surfaces, or any other defects.
3. You must use torque wrench when connecting pipes or flare nut.





Outer Diameter [D, mm]	Fastening torque [N·m]	Depth [A, (mm)]
6.35	14~18	1.3
9.52	34~42	1.8
12.70	49~61	2.0
15.88	68~82	2.2
19.05	100~120	2.2

WARNING

- When installing, make sure there is no leakage. When collecting the refrigerant, stop the compressor first before removing the connection pipe.
  If the refrigerant pipe is not properly connected and the compressor works with the service valve open, the pipe inhales the air and it makes the pressure inside of the refrigerant cycle abnormally high which may lead to explosion and injury.

Electrical work

Wiring work must be done by the certified expert.

- ▶ Wiring work should be performed in accordance with related laws such as technical specification on electric installation or installation guide.
- ▶ You must install exclusive power supply.
  - If you use multi-outlet, there is a risk of electric shock or fire.
  - After initial installation, customer is responsible for re-installation fee.
- ▶ Please install a circuit breaker. (Rated current sensitivity over 30 mA)
  - After initial installation, customer is responsible for re-installation fee.
- ▶ Tightening torque of the screws on the terminal block should be within the rated range and make sure that they don't get loosened.
- ▶ Please connect ground wire.
- ✳ Please install the power wire with it length shorter than 50 m. If the length of the power wire exceeds 50 m inevitably, product may not work or wire could get damaged. Therefore please contact the system expert.

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Power specification

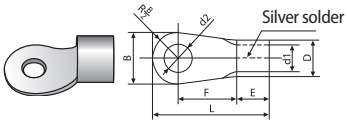
Model name		Indoor unit			AF55JS1MA✳✳N	AF55JV1MA✳✳N	AF55JS3MA✳✳N	AF55JV3MA✳✳N
		Outdoor unit			AF55JS1MAEEX	AF55JV1MAEEX	AF55JS3MAEEX	AF55JV3MAEEX
Power supply		Product			Single phase 230 V, 60 Hz		3 phase 4 wires 400 V, 60 Hz	
Power consumption		Cooling	T1	W	3730	3930	3730	3930
			T3		4400	4950	4400	4950
		Heating	-	W	4950	-	4950	-
Operating current		Cooling	T1	A	16.4	17.2	5.6	6.0
			T3		19.2	21.1	6.7	7.6
		Heating	-	A	21.7	-	7.5	-
Capacity of circuit breaker		Product		A	40		20	
Thickness of ground wire				mm^2	4.0			
Indoor and outdoor unit power wire				mm^2	0.75			
Indoor and outdoor unit communication wire				mm^2	0.75			
Power wire	Type				At least equal to H05RN-F		At least equal to H07RN-F	
	Product	Below 20 m		mm^2	6.0 (Should be purchased separately)		2.5 (Should be purchased separately)	
		20 m or over		mm^2	10.0 (Should be purchased separately)		4.0 (Should be purchased separately)	

NOTE

- Supply cords of parts of appliances for outdoor use shall not be lighter than polychloroprene sheathed flexible cord. (Code designation IEC:60245 IEC 57 / CENELEC: H05RN-F or IEC:60245 IEC66 / CENELEC H07RN-F)

CAUTION

- Please use rated wires or products (with heat resistance over 105 °C) of all the wires and the switches or fuses in the cabinet panel. (Retailer and installer is responsible for the use of parts that does not meet the wire standards or capacity requirements)
- Make sure that wires doesn't make any sparks around the auxiliary power switch or installed in a place with high temperature. (If the ambient temperature is high, allowable current of the wire will decrease and current reduction factor will occur.)
- Please install the auxiliary power switch in a dry place and install panel board or electrical component box.
- Please install circuit breaker in the panel board.
- When connecting the main power, press the wire to the terminal to secure connection.
- Selecting crimp-style ring terminal



Thickness of the wire (mm^2)	B (mm)	d2 (mm)
2.5	Less than 9.5	More than 4.5
4	Less than 9.5	More than 4.5
6	Less than 9.5	More than 4.5
10	Less than 15	More than 8.4

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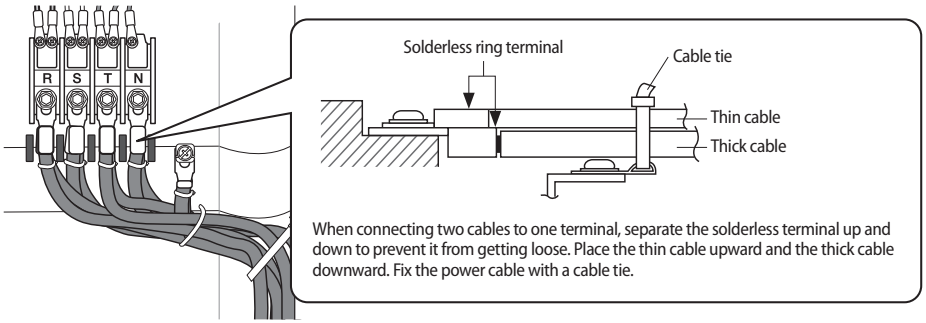
Installing the air conditioner

Connecting the power terminal

- Connect the cables to the terminal board with solderless ring terminals.
- Only sue the certified and rated cables and make sure to firmly connect them without applying any external force to the terminal.
- Connect with a driver and a wrench that are able to apply the rated torque to the screws.
- Connect the terminal screws according to the rated tightening torque. If the terminal is loose, fire can occur due to arc heat generation and if the terminal is too tight, terminal board could get damaged.

Screw	M3	M3.5	M4	M5	M6
Tightening torque for terminal (kgf·cm)	5.0 ~ 7.5	8.0 ~ 12.0	12 ~ 18	20 ~ 30	25 ~ 37.5



When connecting two cables to one terminal, separate the solderless terminal up and down to prevent it from getting loose. Place the thin cable upward and the thick cable downward. Fix the power cable with a cable tie.

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Connecting the wires

AF55J✳1MA✳ Series

- Product uses single phase, 230 V power supply.
- When connecting indoor and outdoor unit connection cable, make sure to match the numbers (or letters) on outdoor unit side to indoor unit side. Make sure to connect the indoor and outdoor unit communication cable to the connector within the electrical component box of each unit.
  (incorrect connection of the indoor and outdoor unit connection cables may cause malfunction of the product.)
- When you connect connection and power cable of the indoor and outdoor unit, make sure that they don't touch the service valve on the refrigerant pipe (gas side) or the pipes without the insulator. Fix the indoor and outdoor unit connection cable to the insulated pipes.
- If the wiring standard is not complied, there is a risk of a fire.
- When you install the circuit breaker, make sure to fix it firmly within the electrical component box.

AF55J✳3MA✳ Series

- Product uses 3 phase 4 wires 400 V power supply.
- When connecting indoor and outdoor unit connection cable, make sure to match the numbers (or letters) on outdoor unit side to indoor unit side. Make sure to connect the indoor and outdoor unit communication cable to the connector within the electrical component box of each unit.
  (incorrect connection of the indoor and outdoor unit connection cables may cause malfunction of the product.)
- When you connect connection and power cable of the indoor and outdoor unit, make sure that they don't touch the service valve on the refrigerant pipe (gas side) or the pipes without the insulator. Fix the indoor and outdoor unit connection cable to the insulated pipes.
- If the wiring standard is not complied, there is a risk of a fire.
- When you install the circuit breaker, make sure to fix it firmly within the electrical component box.
- Make sure to install 3 phase 4 wires type circuit breaker.
- When using the power (R, S, T, N) with the NFB (Overcurrent breaker), make sure to connect the power cable (R, S, T, N) to the R, S, T, N terminal in the outdoor unit's electrical part.

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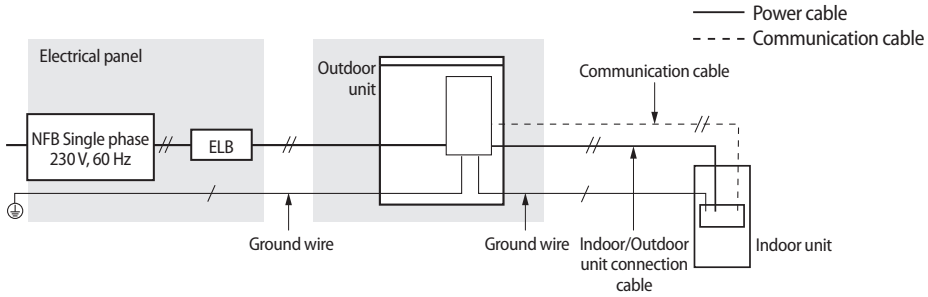
Installing the air conditioner

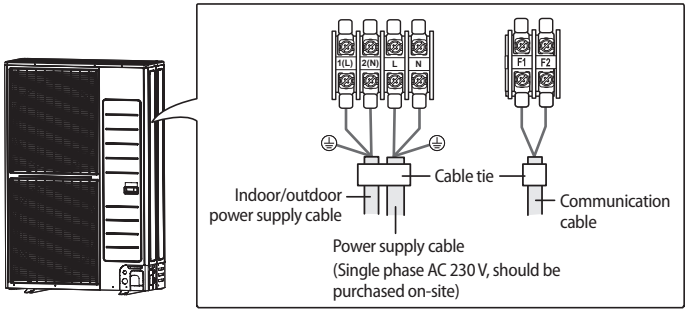
Order of electrical connection

AF55J✳1MA✳ Series

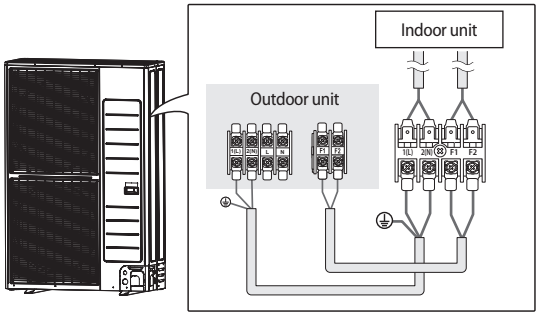
▶ Entire system diagram



▶ Power wiring diagram



▶ Indoor and outdoor unit connection diagram



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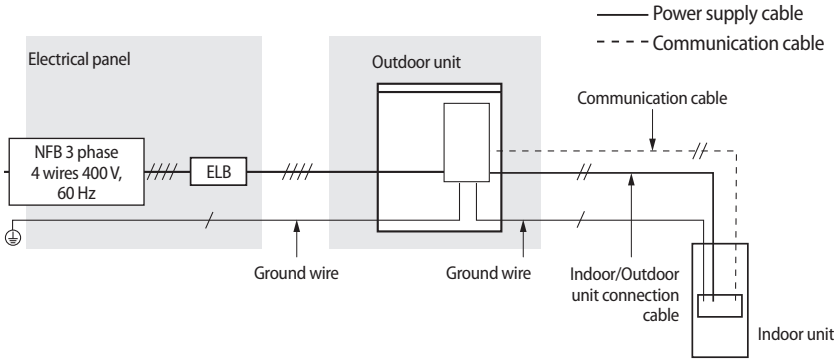
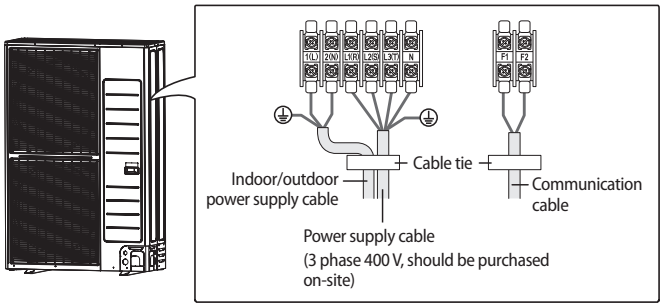
AF55J✳3MA✳ Series

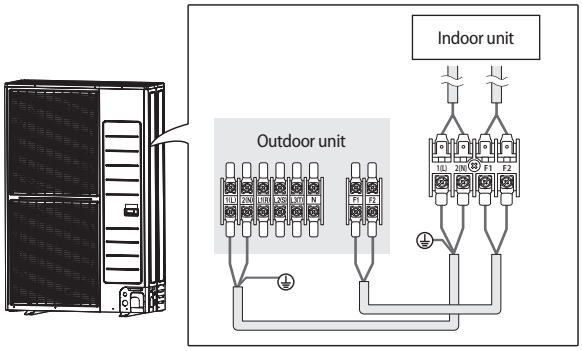
▶ Entire system diagram



▶ Power wiring diagram



▶ Indoor and outdoor unit connection diagram



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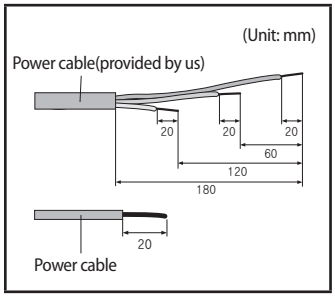
Installing the air conditioner

How to connect your extended power cables

✻ Required supplies (Crimping pliers and insulation tape should be prepared by installer.)

Tools	Crimping pliers	Connection sleeve (mm)	Insulation tape	Contraction tube (mm)
Spec	MH-14	20xØ6.5(HxOD)	Width 19 mm	70 x Ø8.0 (LxOD)
Shape				

1. As shown in the figure, peel off the shields from the rubber/wire of the power cable.
   - Peel off 20 mm of the wire shields of the tube installed already.

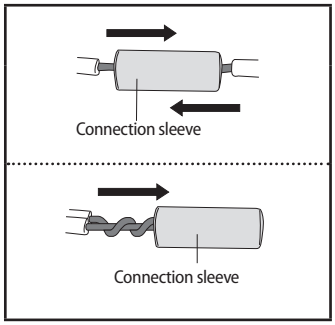


2. Insert both sides of core wire of the power cable into the connection sleeve.

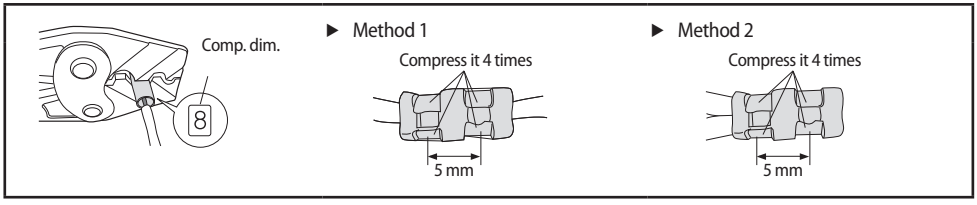
▶ Method 1
Push the core wire in to the sleeve from both sides.

CAUTION
• After peeling off the tube wire, you must insert a contraction tube.

▶ Method 2
Twist the wire cores together and push it in to the sleeve.



3. Using a compressor, compress the two points and flip it over and compress another two points in the same location.
   - The compression dimension should be 8.0.
   - After compressing it, pull both sides of the wire to make sure it is firmly pressed.



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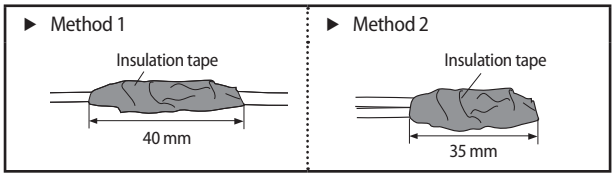
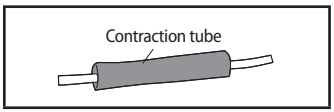
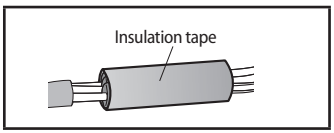
4. Wrap it with the insulation tape twice and position your contraction tube in the middle of the insulation tape.



5. Apply heat to the contraction tube to contract it.

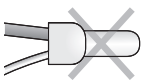


6. After tube contraction work is completed, wrap it with the insulation tape to finish.



WARNING

- In case of extending the electric wire, please DO NOT use a round-shaped pressing socket.
  - Incomplete wire connections can cause electric shock or a fire.



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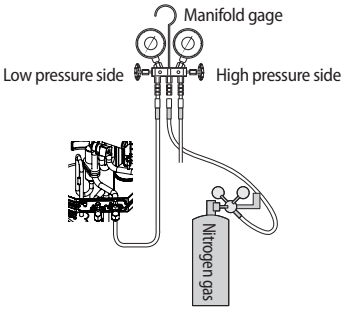
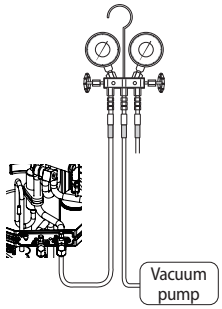
Installing the air conditioner

Vacuuming, gas leak test and charging additional refrigerant

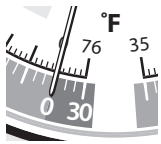
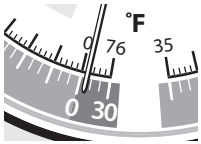
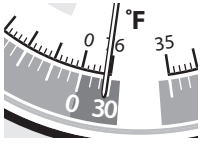
Air tightness test and vacuuming

Use Nitrogen gas for air tightness test as shown in the illustration.





1. Execute air tightness test with nitrogen gas at pressure over 0.2 MPa and below 4.1 MPa. If you apply pressure at over 4.1 MPa, pipes may get damaged. Therefore, apply pressure with pressure regulator and pay attention to the pressure of the nitrogen.
2. After applying Nitrogen gas, check there's any change of pressure, using a pressure regulator.
3. Check for leakage at connection part and brazed part by using soap water.
4. When there's no leakage, open the manifold gage to discharge nitrogen and connect the vacuum pump to the manifold gage.
5. Perform vacuuming for over 30 minutes by using vacuum pump so that pressure is below -0.1006 MPa on the pressure regulator.
   - Use a vacuum pump that is at least 140 ℓ/min in capacity and make sure that vacuuming timing must be longer when piping gets longer.
   - Pressure will not drop even after 5 minutes of vacuuming when there's moisture within the pipe. In this case, execute nitrogen blowing again before executing vacuuming.

Before vacuuming	Changes in pressure gage after 5 minutes of vacuuming	
	When there's moisture	When there is no moisture
		

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Charging the refrigerant and preventing refrigerant leakage

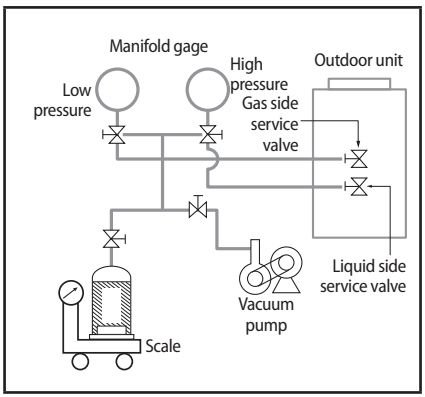
1. Measure the quantity of the refrigerant according to the length of the liquid side pipe. Then, Add fixed quantity of the refrigerant using a scale. (When the pipe length exceeds the standard pipe length of 5 m, charge the additional amount of refrigerant according to the exceeding length. Do not charge the refrigerant by assuming the quantity through pressure gage or by any other method.

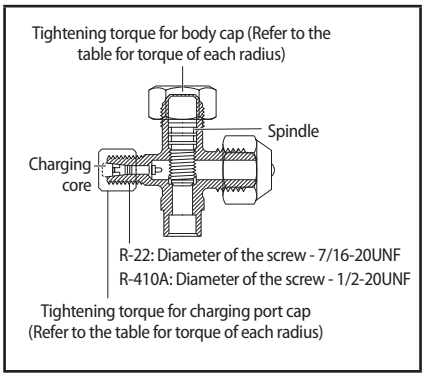
Model name	Refrigerant amount	
	Standard (less 5m)	Additional (over 5m)
	g	g/m
AF55JS✳ Series	3100	30
AF55JV✳ Series	2600	30

   However, if the pipe length is shorter than the standard length, you do not need to charge the additional refrigerant.)
2. Open the manifold gauge valve connected to the liquid side service valve and add the liquid refrigerant.
3. If you cannot add the refrigerant while the outdoor unit is stopped, open the gas side and liquid side service valve and add remaining refrigerant by pressing the cooling trial operation button.
4. After charging the refrigerant, completely open the spindle of the service valve (in counter-clockwise direction) on gas side pipe and liquid pipe side. (Do no push it further if the spindle hits the stopper.)
5. Tighten the cap of the service valve on gas side pipe and liquid side pipe as well as the cap nut for the charging port.
   - There could be slight refrigerant leakage when you open the spindle by using a wrench, but there's nothing wrong with the product.
   - Use a wrench that can easily apply force.

Outer diameter (mm)	Tightening torque	
	Body cap (N•m)	Charging port cap (N•m)
6.35	20 ~ 25	10 ~ 12
9.52	20 ~ 25	
12.7	25 ~ 30	
15.88	30 ~ 35	
19.05	35 ~ 40	

✳ 1 N•m = 10 kgf•cm
- Be extra cautious for the gas leakage on stem nut (gas side port) of the 3 Way valve and cap of service port.




Tightening torque for body cap (Refer to the table for torque of each radius)
Spindle
Charging core
R-22: Diameter of the screw - 7/16-20UNF
R-410A: Diameter of the screw - 1/2-20UNF
Tightening torque for charging port cap (Refer to the table for torque of each radius)

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Installing the air conditioner

Pressure table for temperatures

If you need extra refrigerant charging due to leakage or relocating the product, refer to below table before charging refrigerant.

✻ Cooling operation

Unit : [kPa, G]

Indoor temperature (°C) (Dry bulb / Wet bulb) / Outdoor temperature(°C)	32/23	27/19	21/15
52	1110	900	780
35	920	750	640
21	830	690	590
7	690	540	490
-15	550	400	370

✻ Heating operation

Unit : [kPa, G]

Indoor temperature (°C) (Dry bulb / Wet bulb) / Outdoor temperature(°C)	27/15	20/15	13/10
24	3630	3400	3100
7	2840	2670	2400
-5	2650	2470	2200
-20	2060	1890	1620

✻ Pressure for each temperature was measured at gas side service valve.

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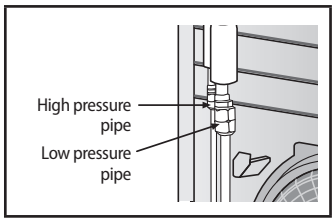
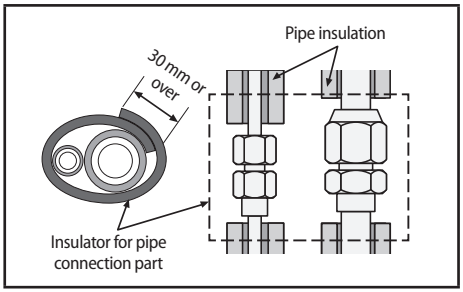
Fixing and insulating the connection part of the pipe

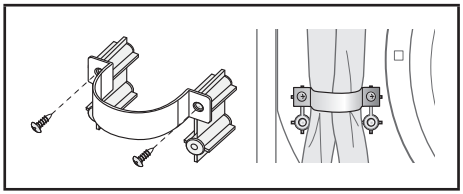
- Check the leakage on the connection part of pipes and make sure the insulated them afterwards. Pipe must be insulated properly so that condensation does not form.
- Use foamed polyethylene with thickness over 5 mm to insulate the connection part of pipe.



- When you insulate the pipe connection part, make sure that overlapping part of the insulator is over 30 mm.

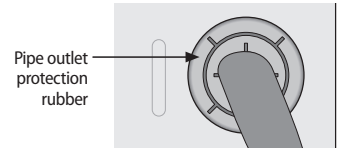


- Fix the pipe with a clamp and screws.



WARNING

- Cut the middle part of the pipe outlet protection rubber before connecting the pipe.



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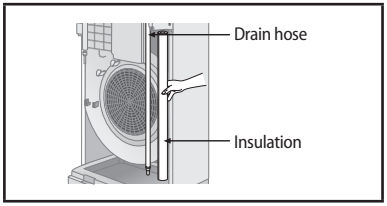
Installing the air conditioner

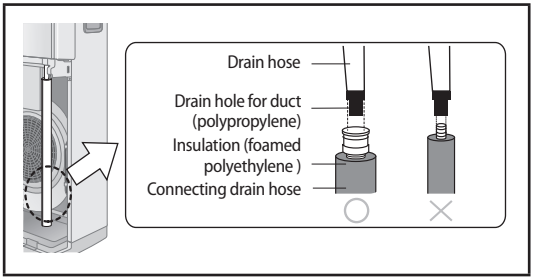
Connecting drain hose of indoor and outdoor unit

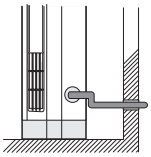
1. To prevent condensation from forming on the drain hose, insulated the drain hose with a supplied insulator.



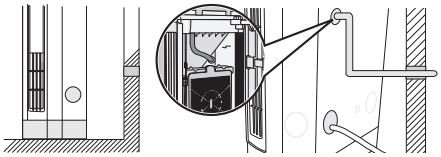
2. Connect the drain hose by pushing the extension drain hose to the insulated drain pipe.

3. Tightly insulated the connection part of the extension drain hose to the insulated drain hose and fix them with a cable tie or tape.





▶ When the hole for the drain pipe on the wall is lower than the hole for drain hose connection



▶ When the hole for the drain pipe on the wall is higher than the hole for drain hose connection

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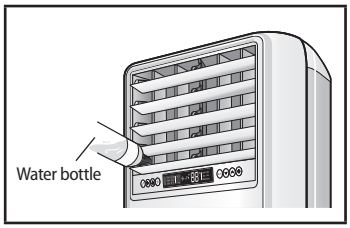
4. After connecting the drain hose, use a water bottle to pour water into the air outlet of the indoor unit to check the drainage. (To prevent water from flowing all over the place, insert the water bottle deeply into the first blade on the left side of the air outlet and slowly pour water.



CAUTION
- As the draining is of natural drain type, install the drain hose in downward direction.
- Be aware that there could be water leakage when the drain hose is not firmly fixed with a cable tie or tape.
- If there is any foreign substance in the drain plate, it may clog the drain pip. Therefore, be sure to remove the foreign substance inside after installation.
- Do not use the drain hose that is connected by number of hoses together.
  - Water may leak from the connection part, therefore install the drain hose in one piece. However, if the length is too short and you cannot avoid connecting number of drain hoses together, make sure to use silicone sealant or other material for water-proofing measures. (Do not use insulating tape.)

Things to check after completing the installation

▶ Before supplying the power, use DC 500 V insulation resistance tester to measure the power (L, N) terminal and the outdoor unit grounding.
  - Measurement should be over 30 MΩ.

CAUTION
- Since you may damage the communication circuit if you test the communication terminal, do not test it.
- Use common circuit tester on communication terminal for open/short circuit.

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Testing operations

1. **Check the power supply between the outdoor unit and the auxiliary circuit breaker.**

▶ 1 phase power supply : L, N

▶ 3 phases power supply : R, S, T, N

2. **Check the indoor unit.**

   1) Check that you have connected the power and communication cables correctly. (If the power cable and communication cables one mixed up or connected incorrectly, the PCB will be damaged.)

   2) Check the thermistor sensor, drain pump/hose, and display are connected correctly.

3. **Press K1 or K2 on the outdoor unit PCB to run the test mode and stop.**

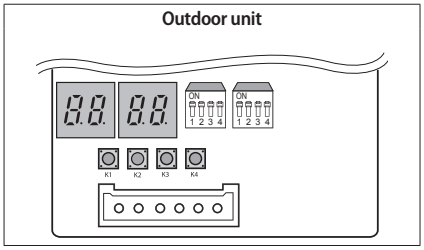
▶ Press K1 button ➛ Start Heating test mode ➛ Press K1 button ➛ Stop ➛ Heating test mode 7-seg display : H1

▶ Press K2 button ➛ Start Cooling test mode ➛ Press K2 button ➛ Stop ➛ Cooling test mode 7-seg display : H2

▶ Press K1 button twice ➛ Start Defrost test mode ➛ Press K1 button ➛ Stop ➛ Defrost test mode 7-seg display : H3

▶ Press K2 button twice ➛ Start Inverter Checker mode ➛ Press K2 button ➛ Stop ➛ Inverter Checker mode 7-seg display : H4

- Condition 1 : The outdoor temperature is under 10 ℃
- Condition 2 : All the temperature conditions should meet the defrost conditions



4. **After 12 minutes of stationary condition check each indoor unit air treatment :**

▶ Cooling mode(indoor unit check) ➛ Inlet air temp. - Outlet air temp. : From 10 ℃ to 12 ℃

▶ Heating mode(indoor unit check) ➛ Outlet air temp. - Inlet air temp. : From 11 ℃ to 14 ℃

▶ In heating mode, the indoor fan motor can remain off to avoid cold air blown into conditioned space.

5. **How to reset the power supply of the outdoor unit and deactivate the eco mode (standby mode) :**

▶ Outdoor unit type A, B : Press K3 button over 1 sec to reset the power supply of the outdoor unit and deactivate the eco mode (standby mode).

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6. **View Mode : When the K4 switch is pressed, you can see information about our system state as below.**

Short push	Display contents	SEG1	SEG2	SEG3	SEG4	Unit
1	Order frequency	1	Hundreds' digit	Tens' digit	Unit digit	Hz
2	Current frequency	2	Hundreds' digit	Tens' digit	Unit digit	Hz
3	The number of current indoor units	3	Hundreds' digit	Tens' digit	Unit digit	EA
4	The sensor for outdoor air intake	4	+ / -	Tens' digit	Unit digit	℃
5	Discharge sensor	5	Hundreds' digit	Tens' digit	Unit digit	℃
6	Eva-Mid sensor	6	+ / -	Tens' digit	Unit digit	℃
7	Cond sensor	7	+ / -	Tens' digit	Unit digit	℃
8	Current	8	Tens' digit	Unit digit	The first place of decimals	A
9	Fan RPM	9	Thousands' digit	Hundreds' digit	Tens' digit	rpm
10	Target discharge temperature	A	Hundreds' digit	Tens' digit	Unit digit	℃
11	EEV	B	Hundreds' digit	Tens' digit	Unit digit	step
12	The capacity sum of indoor units	C	Tens' digit	Unit digit	The first place of decimals	kW
13	Protective control	D	0: Cooling 1: Heating	Protective control 0: No Protective control 1: Freezing 2: Non-stop defrosting 3: Over-load 4: Discharge 5: Total electric current	Frequency status 0: Normal 1: Hold 2: Down 3: Up_limit 4: Down_limit	-
14	The temperature of heat radiating plate	E	Hundreds' digit	Tens' digit	Unit digit	-
15	S/W check	F	-	-	-	-

Long push 1	Main micom version	Year (Hex)	Month (Hex)	Date (Tens' digit)	Date (Unit digit)
After short push 1	Inverter micom version	Year (Hex)	Month (Hex)	Date (Tens' digit)	Date (Unit digit)
After short push 1	E2P version	Year (Hex)	Month (Hex)	Date (Tens' digit)	Date (Unit digit)

✻ Long push K4(Main micom ver.) → short push 1 more(Inv. micom ver.) → short push 1 more(E2P. ver.)

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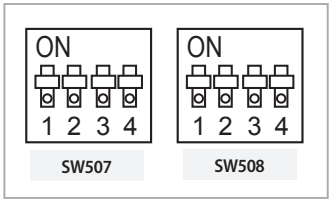
Testing operations

7. **DIP switch option**



▶ DIP switch(SW507) option

	On (default)	Off
Switch 1	Auto address	Manual address
Switch 2	Disable snow prevention control	Enable snow prevention control
Switch 3	Silence Mode option	
Switch 4		

❋ When snow prevention mode is in use, eco mode(standby mode)will not be functional.

❋ When DPM installation is applied, the time for auto addressing will take 1~2minutes.

During the addressing, Ad 00 and Ad 01 will be repeatedly displayed in order for 2 indoor unit connection, Ad 00, Ad 01 and Ad 02 for 3 indoor unit connection, Ad 00, Ad 01, Ad 02 and Ad 03 for 4 indoor unit connection.

When addressing is completed, 3E --, F0 --, Ad --, 00 00 and 01 01 will be repeatedly displayed in order for 2 indoor unit connection, 3E --, F0 --, Ad --, 00 00, 01 01 and 02 02 for 3 indoor unit connection, 3E --, F0 --, Ad --, 00 00, 01 01, 02 02 and 03 03 for 4 indoor unit connection.

▶ DIP switch(SW508) option

	On(default)	Off
Switch 1	Auto Silence Mode	Manual Silence Mode
Switch 2	-	-
Switch 3	-	-
Switch 4	-	-

8. **Silence Mode DIP switch option**

▶ DIP switch(SW507) option

Switch 3	Switch 4	Operation
On	On	Disable Silence mode
On	Off	Silence mode 1st step
Off	On	Silence mode 2nd step
Off	Off	Silence mode 3rd step

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Troubleshooting

The table below give indication about self diagnostic routine. Some of error code requires activities exclusively for Authorized Service Center.

Outdoor unit

If an error occurs during the operation, it is displayed on the outdoor unit PCB LED, both MAIN PCB and INVERTER PCB.

No.	Displayed PCB Assy	Meaning	Remarks	Error Code
-	MAIN/INVERTER	Normal operation (MAIN : Indoor↔Outdoor : Green ON) (INVERTER : MAIN PCB↔INVERTER PCB : Green ON)		-
1	MAIN	Unit quantity miss matching between indoor and outdoor.	Check indoor quantity setting in outdoor	E201
2	MAIN/INVERTER	Abnormal state, no communication between Indoor and Outdoor Main PCB	Check electrical connection and setting	E202
3	MAIN/INVERTER	1min. Time out of communication error(Main↔Inverter)	Check electrical connection and setting	E203
4	MAIN	Outdoor temp sensor error	Check Outdoor sensor Open/ Short	E221
5	MAIN	Cond. temp sensor error	Check Cond. sensor Open/ Short	E231
6	MAIN	Discharge temp sensor error	Check Discharge sensor Open/Short	E251
7	MAIN	OLP Sensor Error	Check OLP sensor Open/Short	E320
8	MAIN	Detection of Outdoor Freezing when Comp. Stop	Check Outdoor Cond.	E403
9	MAIN	Protection of Outdoor Overload when Comp. Stop	Check Comp. when it start	E404
10	MAIN	Discharge temperature of a compressor in an outdoor unit is overheated.		E416
11	MAIN	Heating operation is not available since the outdoor air temperature is over 30 ℃.	Heating	E440
		Cooling operation is not available since the outdoor air temperature is lower than -15 ℃.	Cooling	E441
12	MAIN/INVERTER	Outdoor unit BLDC Fan 1 or Fan 2 error	FAN1 error	E458
			FAN2 error	E475
13	MAIN/INVERTER	Comp. Starting error		E461
14	MAIN	Primary Current Trip error		E462
15	MAIN	Over current trip / PFC over current error	Check OLP sensor	E463
16	MAIN/INVERTER	IPM (IGBT Module) Over Current(O.C)		E464
17	MAIN/INVERTER	Comp. Over load error		E465
18	MAIN/INVERTER	DC-Link voltage under/over error	Check AC Power or DC_Link voltage	E466
19	MAIN/INVERTER	Comp. wire missing error	Check Comp. wire	E467
20	MAIN/INVERTER	Current sensor error	Check Outdoor Inverter PBA	E468
21	MAIN	Outdoor EEPROM error	Check Outdoor EEPROM data	E471
22	MAIN/INVERTER	IPM (IGBT Module) or PFCM Temperature sensor Error	Check Outdoor Inverter PBA	E474

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Troubleshooting

No.	Displayed PCB Assy	Meaning	Remarks	Error Code
23	MAIN/INVERTER	PFC Overload Error	Check Outdoor Inverter PBA	E484
24	MAIN/INVERTER	IPM is over heated.	Check Outdoor Inverter PBA	E500
25	MAIN	GAS Leak error	Check indoor and outdoor unit model	E554
26	MAIN	Capacity miss match between indoor and outdoor	Check indoor and outdoor unit model	E556
27	MAIN	Option code miss matching among the indoors (only for DPM)	Check indoor option code	E557
28	MAIN	Error due to not using Smart Install	Check Indoor option code	E508
29	MAIN	Outdoor EEPROM error (checksum)	Check Outdoor EEPROM Data	E470
30	MAIN	EEV or Valve Close error-Self diagnosis	1. Check if the service valve is open 2. Check for refrigerant leakage (pipe connections, heat exchanger) and charge refrigerant if necessary 3. Check if there's any blockage on refrigerant cycle (indoor unit/outdoor unit) 4. Check if additional refrigerant has been added after pipe extension	E422
31	MAIN	Outdoor EEPROM checksum error between MAIN and INVERTER.	Check Outdoor Inverter PBA	E590
32	MAIN	Error of Terminal Block's Thermal Fuse(Open)		E198

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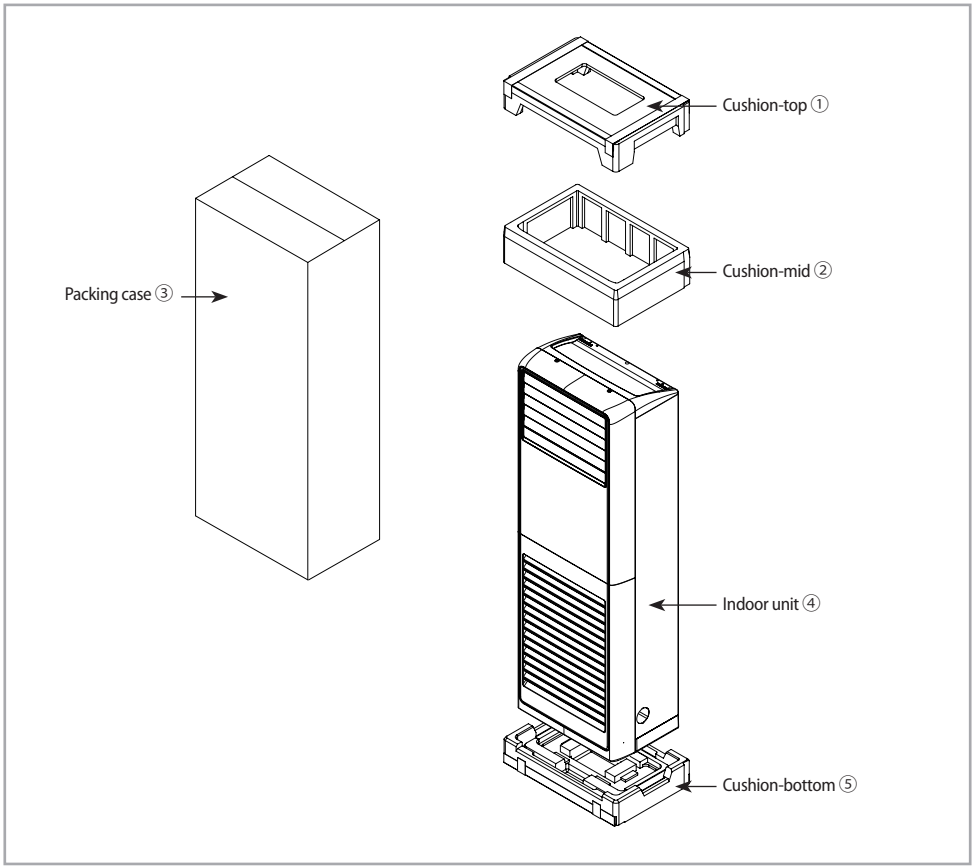
Packing and unpacking guide

Indoor unit



▶ Packing the unit as below procedure

1. Put the indoor unit ④ onto the cushion-bottom ⑤.
2. Assemble cushion-mid ② of indoor unit ④.
3. Put the cushion-top ① onto the indoor unit ④.
4. Put the packing case ③ from the top of set.
5. Seal the packing case ③.

▶ Unpacking the unit as below procedure

1. Take out the packing case ③ from the set.
2. Take out the cushion-top ①.
3. Take out the cushion-mid ②.
4. Move the set from the cushion-bottom ⑤.

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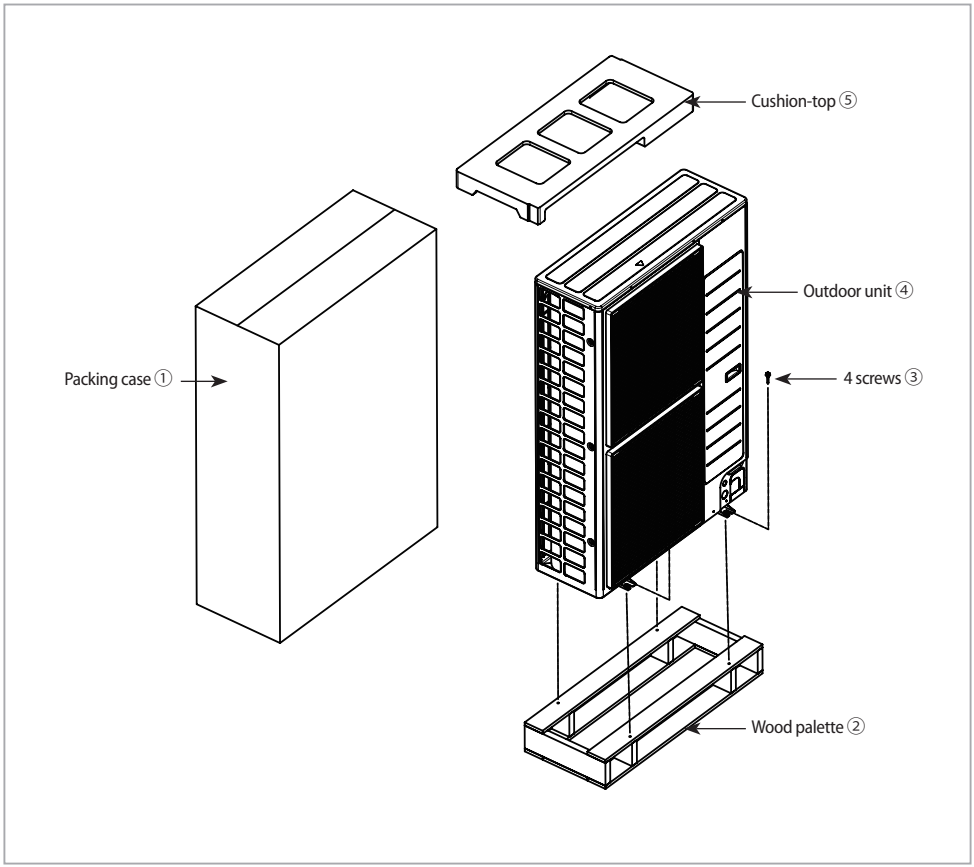
Packing and unpacking guide

Outdoor unit



▶ Packing the unit as below procedure

1. Fix the outdoor unit ④ and the wood palette ② by 4 screws ③.
2. Put the cushion-top ⑤ onto the outdoor unit ④.
3. Put the packing case ① from the top of set.
4. Seal the packing case ①.

▶ Unpacking the unit as below procedure

1. Take out the packing case ① from the set.
2. Take out the cushion-top ⑤.
3. Unscrew 4 screws ③ from the wood palette ② and then move the set.

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Memo

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